

Vol. 23 No. 4 July/August 2000 Published by the American Homebrewers Association

ZYMURGY

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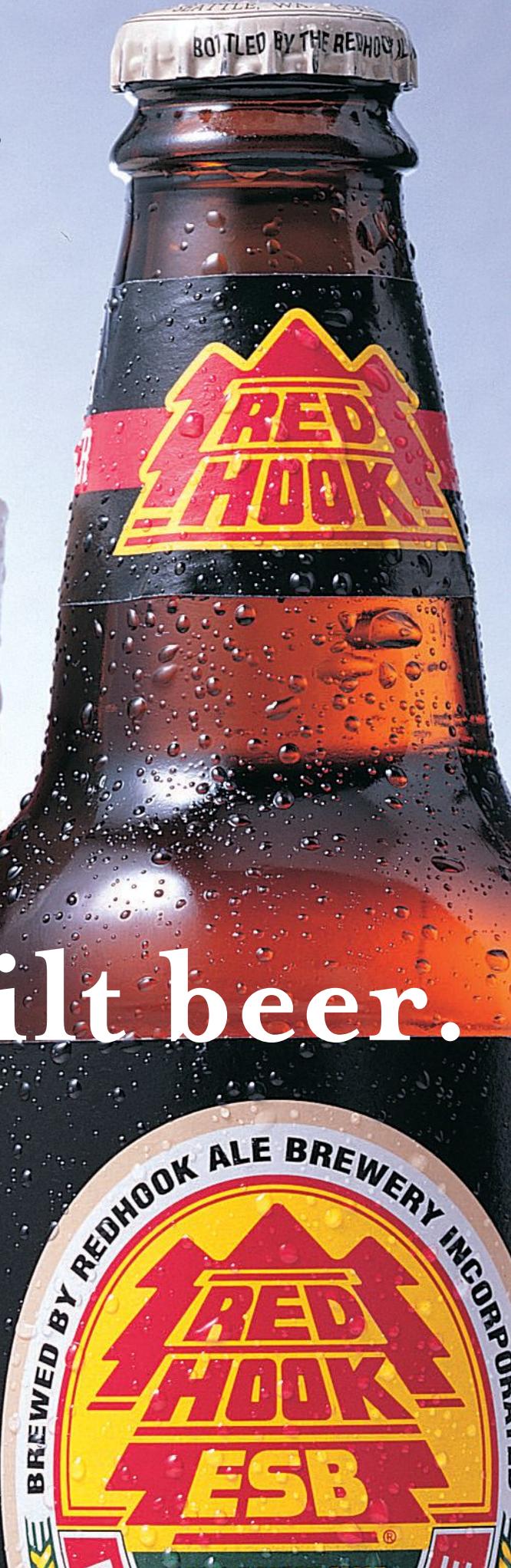
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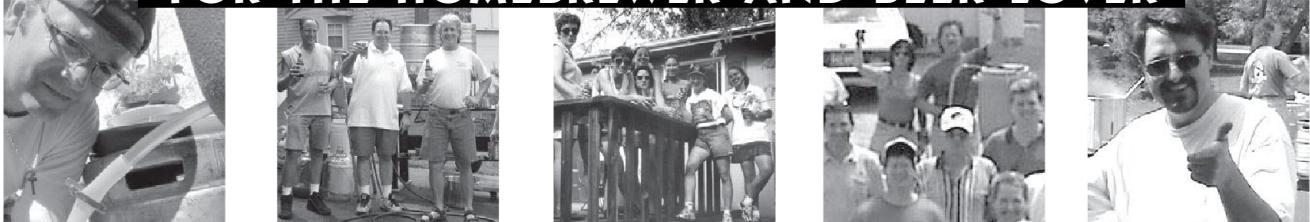
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Journal of the American Homebrewers Association®

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To promote public awareness and appreciation of the quality and variety of beer through education, research and the collection and dissemination of information; to serve as a forum for the technological and cross-cultural aspects of the art of brewing; and to encourage responsible use of beer as an alcohol-containing beverage.

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ZYMURGY®

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

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IT'S THE BEER TALKING

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The original Pilsener turned the world on its ear. You can do the same with this great clone recipe.

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Summer Brewin' can be hot work, but it can still reward you with great beer—if you know what you're doing. Check out these hot weather tips from a red hot homebrewer.

MAIBOCK, LIBATION OF THE GODS (AT LEAST THE RANDY, HALF-GOAT ONES)

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Half fantasy, half reality. You'll never look at a strong pale lager in quite the same way ever again.

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The St. Louis Brews host the second Master's Championship of Amateur Brewing. Great talks, great beers and—drumroll, please—the winners!

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With fall just around the corner, homebrewers will soon have the chance to rustle up some cider. Don't sit on the sidelines again this year. Veteran cider makers Paul Correnty and Charlie Olchowski tell you how to get started.

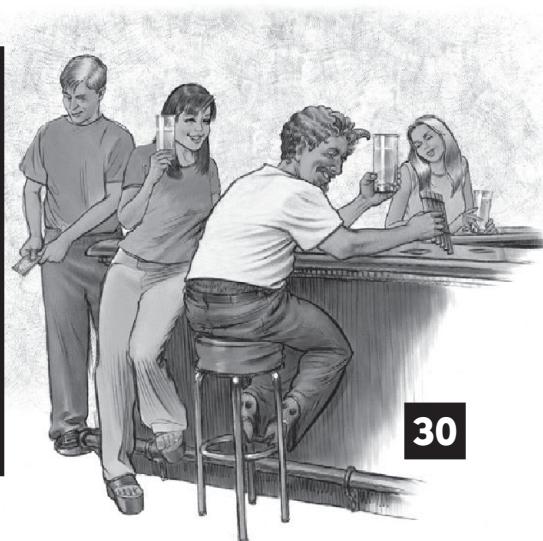
CULT CLASSICS: AVENTINUS A MOUTHFUL IN ANY LANGUAGE

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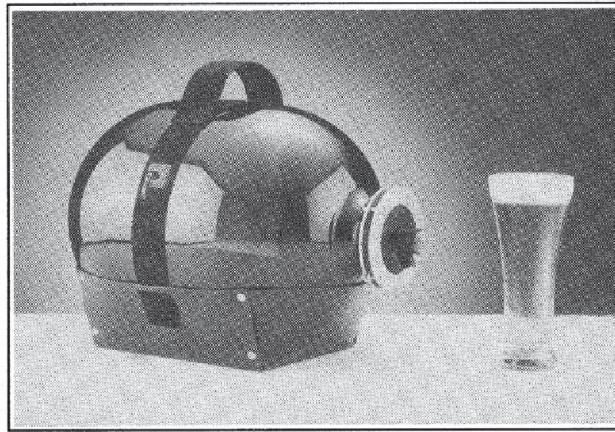
Even if you flunked German—or maybe studied French—you'll find that your tongue is still anxious to meet this seductive concoction that some call a dunkel-weizen-bock beer.

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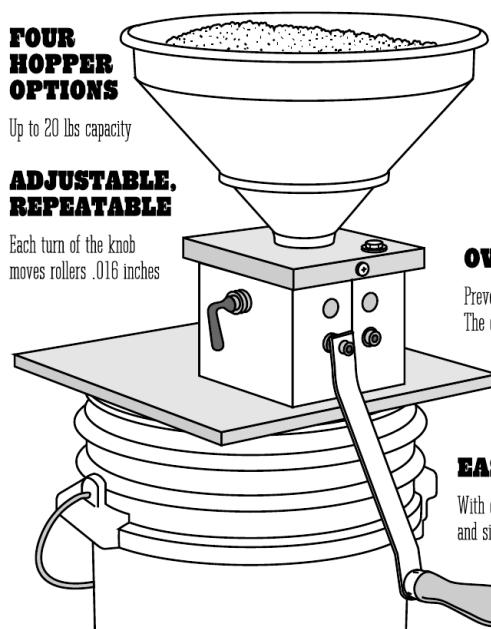
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BY PAUL GATZA

AHA Big Brew

The main focus of my column last issue was the upcoming AHA Big Brew and National Homebrew Day. What a great time we had at Site #97 in Sunshine, Colorado. The traditional National Homebrew Day's eve party on the back rooftop deck of the AHA was again the site for the gathering of friends and an informal mead-off. Stop by May 4th, 2001 for next year's party. After the National Homebrew Day morning coffee stout and coffee cake, we started our festivities with the simultaneous toast at 11 a.m. mountain time, followed by the burner lighting. Slowly over the next several hours, our fifty or so guests started arriving. Each person/animal who came inked or muddy pawed our Big Brew sign-in sheet, gave the kettle or mash a stir and relaxed for a fine day.

The Big Brew was one of the sloppiest, most unscientific beers I have made in a long time. It took us several reheatings of hot liquor and sparge water to realize our thermometer had lost its calibration and was useless to us. AHA Administrator Gary Glass and I used the revised theory of better brewing: "Relax, don't worry, have a homebrew, throw some horseshoes."

We timed the mash, sparge and boil so that the 126th Kentucky Derby would occur mid-boil. The traditional mint juleps were going down too easily, but not as easily as the drink of the day—a perfectly balanced oatmeal stout from Chuck Scalia. The hypothetical betting with hypothetical money on a hypothetical horse went my way and the celebration kicked into a higher gear, as I responsibly learned the virtues of Mexican food, homemade beer and mead, mint juleps and tequila. I awoke Sunday morning to the fortunate realization that I made it through the Big Brew and the unfortunate realization that we left the carboy out all



night and had neglected to clean up after the brewing. No worries, our gravity came out fine, the fermentation is churning away and Fluffy the Bear neglected to visit our cleaning oversight. (See the 1999 *Zymurgy* Special Issue for more on Fluffy.)

As I write this, we had 282 brewing sites listed on our registration station on www.beertown.org, which is an increase from the 1999 Big Brew. By the time you read this the final remitted numbers will be available on beertown. The American pale ale selected from a recipe of Chris P. Frey for the Big Brew is the style for the August club-only competition. See the clubs section for shipping information for the Best of Big Brew.

Making Homebrew Events Happen

Events like the Big Brew could not happen without your membership dues and help from our sponsors. Wyeast Laboratories, Inc. served as the major sponsor for AHA Big Brew 2000, and California Concentrate Company also pitched in with sponsorship. Lallemand Inc., through tireless efforts of AHA Board of Advisors member Rob Moline, is sponsoring a short-course at the Siebel Institute of Technology for an AHA member to be drawn at the AHA National Homebrewers Conference in Livonia at the end of June. Briess Malting,

Crosby and Baker and White Labs combine as sponsors for the AHA on the Road. Twenty-nine category and four award sponsors keep entry fees affordable for the National Homebrew Competition. These sponsors will be listed with the NHC winners in the Winners Circle in the September/October issue of *Zymurgy*.

I want to give special mention to Lucy Sholley, Jim Koch and the other folks at the Boston Beer Company, who again sponsored the Ninkasi Award for the NHC. For each of the last three years, the Boston Beer Company has been the largest AHA sponsor. Thanks for your support of homebrewers and the AHA.

Here is what else has been going on.

AHA on the Road

Charlie Papazian conducted the third AHA on the Road Tour this spring. His tour stops included Princeton, New Jersey; Rockville and Gaithersburg, Maryland; Richmond, Virginia; and Raleigh and Charlotte, North Carolina. The Mid-Atlantic Tour drew over 350 beer enthusiasts and covered over 1000 miles. The purpose of AHA on the Road is to connect personally with homebrew clubs and retail supply shop owners and generate local interest in homebrewing.

Zymurgy advertising manager Julia Herz and I attended the Home Wine and Beer Trade Association (HWBTA) Conference in Niagara Falls, Ontario, Canada to discuss issues that effect both the homebrewing hobbyist community and the homebrewing business community. Paul and Becky Dyster of Niagara Tradition Homebrew organized an AHA on the Road tourstop in Buffalo, merging a busload of conference-goers with Buffalo-area homebrew club members. Other AHA sojourns included Gary Glass and I bowling across Kansas for the judging of the Kansas City Bier Meisters Regional Home-

brew Competition, and I also attended the Masters Championships of Amateur Brewing finals in St. Louis.

We have scheduled "Teach a Friend to Homebrew Day," a joint project of the AHA and HWBTA, to be the first Saturday of November, to help kick off the holiday brewing and gifting season and to reside 6 months in either direction from National Homebrew Day/AHA Big Brew. This plan places this year's Teach a Friend to Homebrew Day on November 4th. My apologies for 2003, which will place the event on the day after Halloween. (Perhaps we should make it the 8th that year.)

The Great American Beer Festival®

Ah yes. It is time to make plans for the 19th Annual Great American Beer Festival (GABF) in Denver, Colorado. The GABF is October 5 to 7, 2000. The GABF is the largest event in the world in terms of the number of different beers available for public sampling. If you have been before, you know what I'm talking about. If you haven't been before, here's a heads up.

The festival is now across the street from its former home. Denver voters last fall approved a convention center remodel, which involves Currigan Hall taking a powder. The structure is an architectural marvel in that it is built in gigantic panels that can be moved. If anyone has a really, really big backyard and a friendly zoning department, Currigan Hall might be yours for the taking. Delivery not included.

This year's GABF will be across the street in Colorado Convention Center Hall A. This venue is more intimate than Currigan Hall, and tickets will go quickly. There will be public sessions the evenings of October 5, 6 and 7. AHA members know that the best session to go to is the Members Only Tasting held Saturday afternoon, October 7th. The hall is less crowded and we announce the winners of the Great American Beer Festival judging. Attendees at the Members Only Tasting receive the first chance to learn who makes the best commercial beers in the country, with lots of elbow room to taste the winners. I also recommend Thursday night, as the hall opens to the excitement of a new

festival, and it is easiest to meet many of the brewers on the first night.

Well, that's the end of this glass of American pale ale. See you in Michigan, Denver or somewhere on the Road.

AHA Elects New Board Members

As we go to press, the results of the voting for four new members of the AHA Board of Advisors have been tallied and the results decided.

A total of 153 ballots were received in total. The winners were, in alphabetical order—Pat Babcock, Louis Bonham, Randy Mosher and Lynne O'Connor.

BOA Chairman Charlie Olchowski congratulated the newly elected members of the board, saying, "I look forward to the talents and contributions that these four people bring to the Board of Advisors. They come from varied segments of the homebrewing community and collectively can help direct our Board to assist the AHA with meeting the needs of its membership."

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

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OUR READERS



A Dog Named Barley

Dear *Zymurgy*,

I have been an AHA member for several years now and I have always enjoyed the education the magazine has provided me through the years. Without your "Great Grain Issue" I don't know how I would have ever survived! With the AHA National Homebrew Convention coming up I decided to brew a couple batches of beer for the competition with my trusted brewing companion "Barley", our 5-month-old Yellow Lab (yes his name really is Barley). I included a picture before we started.... Thanks for a great magazine and all the help you provided!

Respectfully,

Major Jeffrey "Spit" Aivaz
Naval Air Station Kingsville, TX

PS: A great Review for the magazine would be Conical Fermentors. I recently added a 15 gal conical to my set up and it is wonderful. I'm sure there are many home brewers out there that would love to see a review of these great pieces of gear. The prices are reasonable too (for the plastic ones that is).

Thanks,
JAA

Well barley has always been our best friend, based on the picture of your brew-dog we guess you are twice blessed. Best of luck in the upcoming National Homebrew Competition. An equipment review of conical fermentors would certainly be in order—we'll see what we can do.—Ed.

Zymurgy's 1998 "Leap Issue"

Dear *Zymurgy*,

I was cataloging my beer magazines the other day, and noticed that I have only four issues of *Zymurgy* for the year 1998 (Volume 21, Issues 1-4). Have I lost an issue somewhere? Or were there only four issues in 1998? If I've lost an issue, please let me know how to obtain a replacement issue.

Thanks!

Relax and have a homebrew!

George O. Proper

*No cause for alarm—there were indeed only four issues of *Zymurgy* dated "1998." The September/October issue of that year was when *Zymurgy* changed from five issues per year to six, so that year's sequence went: Spring, Summer, Sept/Oct, Nov/Dec. Lest you should feel shortchanged, rest assured that you still received five issues during 1998. The fifth one—which mailed in mid-December—would previously have been labeled "Winter 1998," but instead came under the title of Jan/Feb 1999. Since then they have been going out at regular two month intervals.—Ed.*



Gary Meyer



Paul Gatz

Spittin' Image

Dear *Zymurgy*,

Do you have the feeling that you are looking in a mirror? Every time I open an issue of *Zymurgy* I get the same feeling. I also was thinking that if I had a clone I would be able to get all my work done, then

I would have time to do the fun stuff. So, how about we become each other's clone? We can split up the tasks and still have plenty of time for brewing.

Sincerely,

Gary Meyer
Novato, CA

We definitely see the resemblance...separated at birth, perhaps?—Ed.

Cask Ale's a' Coming

Dear *Zymurgy*,

I have enjoyed your recent articles on cask conditioned/real ales and related topics. I'm not sure if I noticed these articles just because of my new-found interest in real ales or if there is a new insurgency on the American homebrew front. I hope it is the latter, as we all know homebrewing could use a spark of interest, even among the die-hards like myself.

Ralph Nauman
Moscow, Idaho

We couldn't agree more, and certainly hope there is a new real ale insurgency on the horizon...a little revolution is good from time to time, no? —Ed.

Room for Another Three

Dear *Zymurgy*,

Just finished the May/June edition of *Zymurgy* and as usual, I enjoyed it very much. Page 58 of the Brad Kraus article "The Magic of Brewing with Honey" lists "Wyeast 1308" as his favorite yeast for honey beers. There is no such strain of Wyeast yeast available. What is the correct yeast?

Kevin Peil
Midland, MI

Brad Kraus confirms that it is in fact Wyeast 1338, not 1308. Sorry for the confusion.—Ed.



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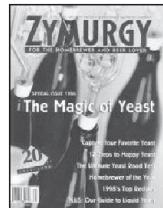
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Yeast Census

Consensus

Wyeast Laboratories reports that the number of yeast cells contained in their "XL" packages is 35 to 60 billion cells. Zymurgy reported lower counts for this package in the November/December 1998 issue. Zymurgy hopes to revisit the issue of yeast counts in a future issue.—Ed.



Corrections

Please note the following two corrections to the May/June issue of *Zymurgy*. First our apologies to meadery Golden Angel Cellars for misprinting their e-mail address as "goldfenangels.com." Obviously, it should be goldenangels.com. Second, for the Brewer's Favorites column, the mash schedule was omitted. Using highly modified two-row malt, the Polish porter should be mashed using a standard infusion schedule with a one-hour rest at 154° F (68° C).



This July,

Celebrate Two Revolutions

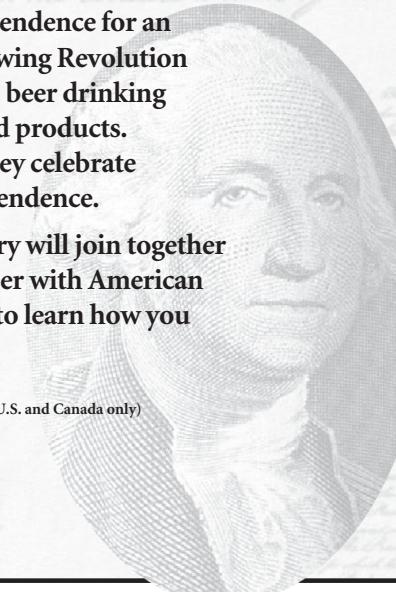


200 years ago the American Revolution won independence for an entire nation. 25 years ago the American Craft Brewing Revolution began expanding that freedom by giving you—the beer drinking public—the ability to choose quality, hand-crafted products. This July you can join Americans everywhere as they celebrate the results of these two historic moments of independence.

In July of 2000 the American craft-brewing industry will join together to celebrate the quality and variety of American beer with American Beer Month. Visit your local brewpub or brewery to learn how you can join in the celebration.

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Drink American!

As I sit down to write this reality-inspired account of the beer life, summer has descended on Chicago. Baseball has started; shorts are back and soon there will be six festivals serving beer every weekend in our fair city. Clearly it is time for a backyard-barbecue-on-the-porch kind of story.

Which brings me to my (imagined) neighbor, Linneas Dunnoski, Lin for short.

Lin is a Chicago kind of guy. He was born and raised here himself, but his folks came from the old country and they still live in the part of town where the mother tongue is spoken in the shops.

When it's time to fire up the barby, we often share a round or two in the backyard. Lin likes a good beer—in fact one might say that Lin likes just about anything that you can eat or drink based upon his rotund figure. Combine that with his balding pate and neatly trimmed mustache and Lin starts looking a lot like TV-tough cop Dennis Franz. Of course in real life, Lin works the computer help desk at OmniNex International.

Lin loves Pilsener Urquell and even the odd Staropramen here and there, but his everyday beer is a good old Heineken. Over the years he has learned that if I offer him something malty to drink, it won't be coming out of a green bottle. He accepts my offers occasionally, but he won't ask me for a brew any more unless he is out of stock himself—and short on money.

When he wanders over on this particular sunny May day, the subject of beer comes up (some how) and I mention the fact that July is American Beer month.

"Sounds good," Lin says. "During da mont' a' July, I promise ta drink beer *only* in America."

He rewards himself for this comedic comment with a big smile and a quick sip from the bottle of Heineken in his hand. Clearly it is not his first of the day.



"Actually I was thinking of something a bit more radical," I say. "I was thinking about drinking nothing but American-made beers during the month of July."

"Really?" Lin's eyes are wide with astonishment. "I never seen you drink a Bud before."

Now I'm smiling. And shaking my head. Lin's beer world includes green bottles and cans, I guess, but not much else. I've tried to educate him about the broader world of beer over the years—and he's been a willing student at times. But in the end he always comes back to the imported brands he's known for many years.

Sadly, Lin is like a lot of American consumers these days. They tried craft beers during the 1990s and in the process developed a taste for good beer. But after a while they got burned out on all the brands, the constant changes and a few problems with inconsistent beer quality. As a result, beer drinkers as a group have been creeping toward the imported beers, especially the well-known brands.

"Look Lin, I'm not going to be drinking any Budweiser, okay? There are plenty of good craft beers out there that can substitute for any import you might think of."

"Oh yeah, craft beers. Aren't dey dyin' out?" says Lin.

"No Lin, they're not. Sales are up and there are more breweries than ever."

"Yeah, well what about dat Chicago Brewing Company, what happened ta dem?" he asks.

"They closed," I admit.

"And how 'bout dat Pavichavich guy, he made a good beer and I ain't seen him in awhile."

"Yeah, Pavichavich's company closed too," I admit, "but Goose Island makes the beer now. It's called Baderbrau and it's very good."

"Yeah? I used to like that beer. I'll have to try it again sometime."

"July would be the perfect time to do that," I say. "I bet you'll like it just as much as Heineken."

"May be," Lin says, making two words out of one in classic Chicago style.

In truth, the "Drink American" idea isn't mine. I've stolen it from Larry Bell, founder of the Kalamazoo Brewing Company in Michigan and maker of Bell's beers. Not long ago, Bell told me that he's sick and tired of seeing American brewers drinking European beers. "We've got to set an example for our customers," he said. "From now on I'm drinking only American beers."

While impressed with Bell's noble sacrifice, I can't say that I was tempted to join him. There are a lot of good imported beers out there—beers that any competent brewer or beer judge needs to drink from time to time just to keep his palate alive and his beer mind working. But Bell's point is a good one. As an American brewer—even if only on an amateur basis at this point—I do feel some obligation to support my fellow citizen-brewers. And American Beer month is the perfect opportunity to follow Bell's lead with a little jingoistic beer buying of my own.

"Look Lin, you can join me on this drink American thing—I'll even help you out."

"What? You gonna buy me some beer? Or you gonna ply me with some of that homebrewed stuff? Somma dat's not bad."

"I think you can fend for yourself at the grocery store, Lin, but I can help you figure out what to buy."

"Yeah, how's dat?"

"Simple. You tell me the name of a beer that you want to drink and I'll help you find an American beer that's similar and just as good."

At this point, reality is beginning to dawn on my friend Lin. "So let me get this straight," he says. "For the entire month of

July, you want me to drink nuttin' but American beer?"

"Right."

"And any time I want to drink somethin' that's not American, you're gonna help me figure out what American beer to buy instead?"

"That's the plan."

"And you would do that just for me?"

"Actually, no. I'm extending the same challenge and making the same offer of help to every homebrewer in America through my column in *Zymurgy*."

"Hey, dat must be hundreds of guys, how you gonna help all dem?"

"Thousands actually, Lin, but the help part is easy. Anybody who is serious about drinking American and really needs help finding a good American substitute for an import beer they love can e-mail me at ray@aob.org. If I don't have an answer for them, or if the beer I recommend isn't available in their area, I'll check with the brewers nearby to help them track something down. If all else fails, I'll call Larry Bell and put him on the hot seat—after all, it was his idea."

"Bell, huh? He's the guy what throws that Eccentric day thing—dat thing you went to two, t'ree years ago in your pajamas."

"Right guy; wrong outfit, Lin. And until you come to Eccentric day yourself, you're not to mock what others do there."

"So why does this Bell guy have such a bug about American beer anyway?"

"Lin, did you ever go to Siebens?" I ask.

"Me? Whadda you think just 'cause I got no hair dat I was drinkin beer forty years ago?"

"No Lin, not the old Sieben's beer garden that your grandad went to. The Siebens brewpub that opened up down on Ontario in the late 1980s? It's a Persian restaurant called Reza's now."

"Oh yeah, dat place. I tought it was Berghoff's before da Persian guy bought it."

"Well, it has a long history. First some guys set it up as a brewery called Siebens and it was Chicago's first major brewpub. That went under and the Berghoff guys bought it and they also operated it as a brewpub. After a couple of years, that went under and now it's the Persian restaurant. But nobody's brewing beer there anymore."

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"Yeah, I like dat place," said Lin musing on his last visit to Chicago's own fermentative ghost house. "Dey still got beer der though, right? And some good stuff too as I recall."

"Depends on what you call good," I replied.

"Oh, come on! Dey got Heineken and Becks on tap dere. Dey've even got dat thick Guinness draft that's givin' you a spare tire, if you know what I mean."

I sigh deeply and look at Lin over the top of my glasses. He looks away from me, downing another swig from his green bottle.

"Lin, I'm going to skip telling you again why Guinness is really a light beer, but only because there is a more important point to be made here."

"Gee, tanks—some sorta point would be nice. Like what has this all got to do with this Bell guy and drinking American beer?"

"The point is this. Last week I went to Reza's for dinner with the family. As I'm walking past the bar, I eyeball the tap handles. What do I see? I see Amstel and Heineken; I see Corona and Beck's; I see Bass and Guinness." As I spit out this list, my voice is rising with modest exasperation and annoyance.

Lin is now sitting still and quiet in his lawn chair. When I stop this recitation his lips purse and his eyes shift skyward in hopes that some overhead blimp or stray airplane-towed signage from Wrigley Field will clue him in to why I'm getting worked up. But no luck. Lin is on his own to figure this one out.

"Sounds like a pretty good beer list," he says tentatively. "Dey probbly even have a Persian beer in bottles if dat's what you want."

I sigh again. "Lin, it's not about Persian beer. It's about imports in general."

"Ah," Lin nods, remembering where we started all this.

"The problem is this: here I am in a place that opened to promote American brewing in Chicago—not once, but twice. I'm looking at the copper domes of a Chicago brew-house and when I look at the taps all I see is imported beer!"

"Ah," Lin grunts again. Perhaps enlightenment is beginning to dawn.

He opens his mouth as if to say something and stops, perhaps thinking better of it for the moment. Then he blurts it out anyway. "You know da Persian people, dey have a ting for Mexican beer."

I'm looking at him over the top of my glasses again. This time I'm frowning.

"No, it's true," he says. "I worked wit' dis Persian guy one time. He wouldn't drink nothin' but Corona."

"Look Lin, here's the point: Reza's is a former American brewery and now just about all you can get there is imported beer."

"You sure about that?" Lin inquires. "Seems to me dey got Sam Adams dere and maybe even somma dat Goose Island stuff."

"That's true," I admit. "The menu lists four beers that are actually made in America out of the twelve on tap—although two of them are Miller products. And only one beer comes from an Illinois brewer."

"So you got yer microbrews dere, what's da problem?"

"The problem is that we gotta use it or we're going to lose it."

Lin is confused again: "Lose what?"

"Our American beer culture. Look, there are a lot of good American beers out there these days—even you would admit that, right?"

"Yeah. So?"

"So if beer drinkers like you and me don't drink those American beers on a regular basis they aren't going to be around for long. Too many of us—myself included—have gotten to the point where we know a lot about the American beer market, but we don't necessarily support it with regular patronage. American Beer Month gives us a chance to shake off old habits and take a fresh look at what American brewers have to offer."

"Got it," Lin says, before knocking back the last of his Heineken.

"So are you with me on this drink American thing?" I query as he stands to fetch a refill.

"Sure," Lin says. "But let me get another Heinie—July's gonna be here before you know it."

Ray Daniels drinks beer mostly in Chicago. In July, he'll drink only American-made beer wherever he goes.

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Pilsner Urquell

Pilsner Urquell is a lesson in simplicity and balance. According to Michael Jackson, while Pilsner Urquell is not the first lager beer as is sometimes claimed, it was the first golden, clear beer. Lagers made prior to its introduction in 1842 were all dark or cloudy. First sold simply as "Pilsner," the word "Urquell" (meaning "original source")

Pilsner Urquell Clone

Recipe for 5 gallons (19 L)

9	lb Pilsner malt (4.1 kg)
.5	lb Cara-Pils malt (.23 kg)
4	oz Czech Saaz whole hops, 3% alpha acid (113 g) (90 min)
2	oz Czech Saaz whole hops, 3% alpha acid (57 g) (15 min)
1	oz Czech Saaz whole hops, 3% alpha acid (28 g) (3 min)
2	oz Czech Saaz whole hops, 3% alpha acid (28 g) (dry)
	Czech Pilsner lager yeast
1.25	c. extra-light dry malt extract (300 mL), for priming

Brewer's specifics:

- Boiling time: 90 minutes
- Original gravity: 1.052
- Finishing gravity: 1.012

Use soft brewing water. Mash grains using a decoction mash schedule (preferred if time allows) or use a step-infusion schedule with rests at 122° F (50° C), 148° F (64° C) and 156° F (69° C). Boil, chill to 50° F (10° C) and pitch yeast. Ferment at 45 to 50° F (7 to 10° C) until completion (usually 1 to 2 weeks), then drop temperature to 35° F (2° C) and rack into a conditioning vessel with dry hops. Lager 4-6 weeks.

Extract method: crush and steep .5 lb Cara-Pils malt (.23 kg) in 150° F (65° C) brewing water for 20 minutes. Strain, add extract, and bring to a boil. Pitch and ferment as above.



was added 56 years later to protect the brand's identity. Today, the original Pilsner, as opposed to Pilsner-style beers that in many countries worldwide represent the only type of beer available, is known for its soft malt character and its prominent, floral hopiness.

Cloning this classic is a challenge; while the recipe seems simple enough, it is so delicate a beer that there is a lot to go wrong. Even the subtlest flaws will be easily detectable, and everyone's brew system is different. Therefore, this is one for brewers with both confidence and patience. It may take a couple of tries to fine-tune, even for the best brewers! By all means, feel free to tweak this recipe as you see fit.

Having the right ingredients is of utmost importance for a proper Pilsner; substitutions may still give you a great beer, but it will be significantly different. German Pilsner malt, imported, whole Czech Saaz hops, and a good batch of liquid Czech Pilsner lager

yeast are all necessary components. Technique is also important—the all-grain version, with the added fussing over a decoction mash schedule, is preferable here. One can get by with a step-infusion mash, but yield and flavor will be somewhat lessened.

Proper chilling and refrigeration equipment also play a key role in the proper production of this lager. A wort chiller and a temperature-controlled fridge are very highly recommended. In fact, this is really a gadget-lover's beer recipe, since the use of filtration to give the beer a crystal-clear appearance and kegs to force-carbonate and store it are also great things to do with a Pilsner.

Amahl Turczyn is the associate editor of *Zymurgy* magazine.



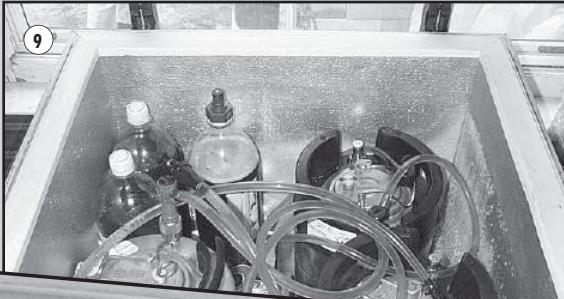
Having the right ingredients is of utmost importance for a proper Pilsner; substitutions may still give you a great beer, but it will be significantly different.

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American Pale Ale



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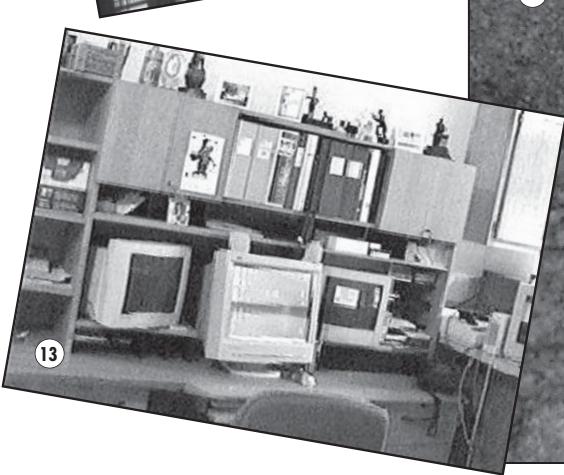


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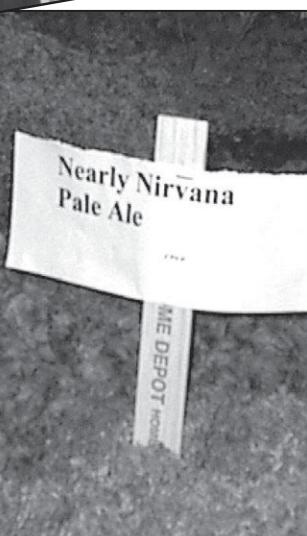


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Some captions apply to more than one photo.

1) Ed Seamus and friends of the Silverado Homebrew Club, Steamwood, IL, enjoy a few cold ones at their Big Brew Site.

2) In this photo, Bruce King has just attended the Ames, IA, Big Brew site, where his acknowledgement of the toast had to be limited to smelling the bottle for he had to fly and return with beers for other brewers.

3, 4, 10, 14) Twenty-seven brewers from The Fermental Order of Renaissance Draughtsmen and The Ann Arbor Brewers Guild joined Chris (Chrispy) P. Frey in Saline, MI with 135 Gallons of Nearly Nirvana Pale Ale. A signpost marks the mountain of mash.

5, 12) "Babes in Brewland" with members from Hop, Barley, and the Alers Brew Club, of Northglenn, CO.

6) Hubert Hanghofer from Salzburg, Austria, is the author of homebrewing book "Bier brauen nach eigenem Geschmack."

7, 13) The Virtual Brew was a live broadcast from the Two Dogs Brewery, in Gainesville, GA with participants from The Chicken City Ale Raisers.

8) Anthony Hayes is a member of the Wort Hog Brewers Club in Johannesburg, South Africa.

9) Matt Pelletier of Lyman, ME, has been a homebrewer for 15 years. His modified freezer is shown here with two versions of American Pale Ale, Hefeweizen, and ESB.

11) Paul Mahoney of the Star City Brewers Guild in Roanoke, VA stirs the brew.

Brewers Rally to Launch American Beer Month in Philadelphia

Hundreds of brewers and other members of the American brewing industry will gather on the steps of the Philadelphia Museum of Art on Saturday, July 1, 2000 at 2:00 p.m. for the first-ever American Brewers Rally. Drawing from Philadelphia's spirit of independence and revolution, attendees will use the rally to launch American Beer Month, a nationwide July celebration of the pride and heritage of American brewing.

The American Brewers Rally will feature speeches by some of the most notable US brewers. American Beer Month will be celebrated with national and local brewing events sponsored by breweries, brewers' guilds, wholesalers, restaurants, and other brewing-related companies. American Beer Month is presented by the Institute for Brewing Studies (IBS).

"American Beer Month is like an Independence Day for the American craft-brewing industry," says John Hickenlooper,

owner of Wynkoop Brewery. "For more than a decade brewers from around the world have looked with envy at the innovations and excitement of the American microbrewery revolution. Now it is finally time for Americans to celebrate these successes in our own country." Along with Hickenlooper, fellow brewing pioneers Larry Bell of Kalamazoo Brewing Co. and Carol Stoudt of Stoudt's Brewery are organizing the American Brewers Rally.

No celebration of American brewing would be complete without the opportunity to sample local beers, and accordingly, Saturday's rally will be preceded by a party on Friday night and immediately followed by a Philadelphia-area pub crawl on Saturday night.

The pre-rally party for brewers and media will be held from 7:00–9:00 pm on Friday, June 30 at Stoudt's Brewery, located in Adamstown, PA. The party is followed by Stoudt's Rock-n-Brew featuring a local band along with Stoudt's award winning brews. Immediately following the rally on Saturday, attendees will embark upon a pub crawl across the Philadelphia area, visiting more than ten brewpubs and multi-tap pub houses that have agreed to feature only American-brewed beers during the month of July.

At press time, brewing representatives from 12 states had made definite plans to attend the American Brewers Rally. However, the Institute for Brewing Studies expects participation to increase rapidly as news of the event spreads. The IBS also asks that breweries across the nation make plans to attend the rally and help ensure that

every American state is represented at this important occasion in the history of American brewing.

In other American Beer Month-related news, four additional state brewers guilds have joined the 22 national, regional, and state brewing organizations, which had previously endorsed American Beer Month. The Utah Brewers Guild, the Pennsylvania Brewers Guild, The Minnesota Brewers Guild and the Southeastern Brewers Guild (representing Georgia and Alabama) are now proud endorsers of the celebration.

American homebrewers can support their commercial brethren by participating in "American Beer" events in July or by helping to create special events of their own with family and friends. For a calendar of special events taking place during American beer month, see the web page at www.beertown.org/PR/abm_celebrations.htm.

If your state does not have its own festival during July, there are plenty of other ways you can join in celebrating American Beer Month with family, friends or homebrew club members:

- ★ hold an American beer dinner
- ★ organize an educational seminar
- ★ brew a traditional or historical American beer recipe
- ★ put together an American beer history trivia contest

Finally, if you miss out on the fun of American Beer Month this year, don't despair. Next year we'll be doing it all over again, so start planning ahead for next year's American beer spectacular!

Visit www.beertown.org for more information on American Beer Month, including a list of local events.

JoAnne Carilli is the Marketing Director for the Association of Brewers.



Belgian Mysteries Produce a Beer Without Peer

Peter Bouckaert, formerly of the famed Belgian brewery Rodenbach, but now with Colorado's New Belgium Brewery, chose an intriguingly obscure Belgian strong ale for his favorite: a Flemish ale by the name of Hapkin. "It is strong but well-balanced," said Bouckaert, "and while it comes from a very small brewery, without a lot of fancy equipment, the consistency and quality of the beer is excellent." Bouckaert also was a bit biased in favor of the brewery because he knows the people working there—not only are they from the same region of Belgium, he also studied at the same brewing schools as they did.

I was concerned when Bouckaert picked Hapkin—we like to sample the beers featured in this column and I was afraid that getting a bottle of this one might prove impossible, especially on a tight deadline. But I was in luck. As it turned out, I sampled Hapkin in Brugge two years ago at a cozy underground tavern called the Curiosa. My notes reveal that it is a pale, golden blonde color with a dry, fruity palate and just a hint of alcohol (even at 8.5% by volume!). It was one of the better strong, golden ales available in Belgium, with a tight, fluffy head and dense lace down the side of the glass. It finished with a subtle alcoholic warming, but the hops seemed most evident just after the finish, leaving a spicy dryness. I was put off at the time by a slight, papery oxidation in the beer, but most of the bottles we purchased came from the ubiquitous gift shops around the public squares (or Plaats in



Flemish). These places stock an amazing variety of local brew, but few bother to refrigerate or protect the bottles from strong light—and who knows how long that particular bottle may have sat collecting dust there? Perhaps that is one reason so many Belgian bottle ales pack enough of an alcoholic punch to drop a moose.

Discussing the beer in terms of style with Bouckaert turned out to be a mistake. Suggesting that the beer seemed to be in the Belgian Tripel style brought this immediate response: "This beer does not have anything to do with a tripel. People here at [New Belgium Brewery] also compare it with a tripel. I hate style and classifications, and as a consequence judging based on styles. Why can't people approach beer as beer? [As a brewer], if you create a beer, do you think about [conforming to] a style? I think Andy Warhol didn't care about how they classi-

"It is strong but well-balanced," said Bouckaert, "and while it comes from a very small brewery, without a lot of fancy equipment, the consistency and quality of the beer is excellent."

fied him, he just had fun and made what he wanted to make. This is brewing, it's an art."

Indeed, perhaps being raised in a country in which there are so many different beers, with each brewer trying to create different expressions of strength, flavor, and put such a wide variety of ingredients in beer, the idea of dividing Belgian beer into styles does seem pointless, if not downright insulting. It is a point well made.

According to Michael Jackson, the name Hapkin is derived from a 12th-century Flemish count, Boudeijn Hapkin, who wielded the axe shown on the beer's label. Hapkin, from the Louwaege brewery of Kortemark, is made with a decoction mash, has four hop

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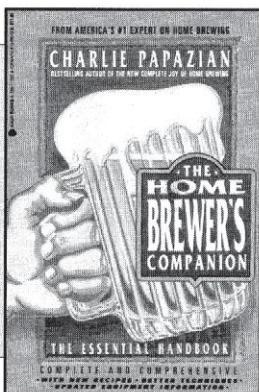
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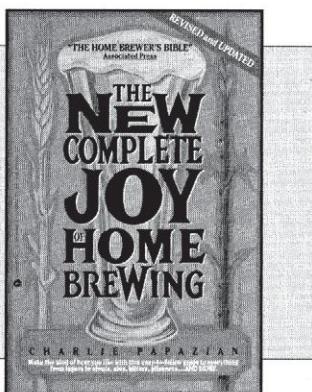
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Recipe for 5 gallons (19 L)

- | | |
|-------------------------|---|
| 8 | lb Belgian pale malt (3.6 kg) |
| 2 | lb Belgian aromatic malt (.91 kg) |
| 0.5 | lb corn sugar or Belgian clear candi sugar (.23 kg) |
| 3 | oz Styrian Golding hops (5.5% alpha acid) (85 g) 60 min |
| 0.5 | oz Saaz hops (3% alpha acid) (14 g) 15 min |
| 1 | oz Saaz hops (3% alpha acid) (28) 3 min |
| Belgian Abbey ale yeast | |
| 0.75 | c corn sugar (to prime) |

Brewer's Specifics

Employ a double-decoction mash schedule. Bouckaert suggests that this is important, along with an attenuative yeast strain, to achieve the low finishing gravity characteristic of this beer. He also suggests fermenting the beer quite cool.

- Boiling time: 90 min
- Original Gravity: 1.075
- Final Gravity: 1.011 to 1.012
- Primary fermentation: 7 days at 60 to 61° F (15° C)
- Secondary fermentation: 14 days at 60 to 61° F (15° C)

additions, and goes through a two-stage primary fermentation. Duplicating the beer at home has the major challenge of finding an appropriate yeast strain. As Bouckaert notes, "The yeast, in my eyes, is the biggest mystery. I have already tried different strains, but to no satisfaction. The yeast that is in the bottle is a different one."

So without actually getting the yeast directly from the brewery (which may very well be understandably hesitant to hand it over), any clone of Hapkin would miss the mark. However, it is still worth hazarding a guess. While my memory of the beer at this point is hazy at best, with a little help from Bouckaert, I have developed a recipe that may duplicate this fierce-yet-delicate Belgian ale. On the other hand, it may simply produce a wonderful but unique Belgian style—er, sorry Mr. Bouckaert, type—beer.

Amahl Turczyn is the associate editor of *Zymurgy* magazine.

Lifetime Achievement Winner Dies

The first recipient of the AHA Lifetime Achievement Award, Bill Pfeiffer, passed away on the morning of May 4, 2000 at his home in Brighton, MI. Bill began brewing in 1976 and was a major influence in the formation and development of the Beer Judge Certification Program and contributed significantly to many other national and Midwest homebrew events and organizations such as the Mazer Cup Mead Competition, the Michigan State Fair, the Taste of the Great Lakes, and the National Homebrew Competition. The commemorative mead for the 2000 National Homebrew Conference in Livonia, MI was brewed by Bill and many of the homebrewers that he influenced. Early in his life, Bill was a medic in Vietnam. He then earned a PhD in Education and was an educator for more than 20 years. He was 55 years old and is survived by two sons and four brothers.

Club-Only Competition News

The AHA would like to thank Kevin Johnson and the HeadHunters Homebrew Club for hosting the Belgian Lambic AHA Club-Only Competition in March. This competition was the fifth one out of six 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 23 entries.

Congratulations to the following winners:

First Place

Douglas Faynor, representing Capitol Brewers. Doug also brewed Geezer's Gueuze,

the commemorative beer for the 1999 AHA National Homebrewers Conference

Second Place

Marc Gaspard, representing the Kansas City Bier Meisters, with a beverage inspired the Diva herself, Kathy Pittman Gaspard

Third Place

Greg and Liz Lorton, representing the Quality Ale and Fermentation Fraternity (QUAFF)

Best of Big Brew Club-Only Competition

The August AHA Club-Only Competition sees the first connection of Big Brew to the Club-Only Competitions with "Best of Big Brew," hosted by Richard Truelove, Ray Kruse and the Cross Street Irregulars. One entry per club of two bottles of the official Big Brew, "Nearly Nirvana Pale Ale," will be accepted for the judging. The major sponsor for Big Brew is Wyeast Laboratories Inc. Please send your entries to:

AHA Entry
Kruse Controls
1583 Sulpher Spring Road
Suite 104
Baltimore, MD 21227

The entry deadline is July 28, 2000. Judging is tentatively slated for August 6, 2000

Homebrew Club of the Year Standings Points Club

15	Kansas City Bier Meisters
13	Capitol Brewers
6	Brew Angels
6	NET Hoppers
3	Brewers United for Real Potables (BURP)
3	Derby Brew Club

- 1 Ann Arbor Brewers Guild
- 1 Cincinnati Malt Infusers
- 1 Mountain Ale and Lager Tasters (M.A.L.T.)
- 1 Quality Ale and Fermentation Fraternity (QUAFF)

What a battle we have going for the Homebrew Club of the Year. The Capitol Brewers, who won the 1998 Homebrew Club of the Year trophy, have placed in four consecutive AHA Club-Only Competitions. That has to be a record. The Kansas City Bier Meisters have two firsts and a second in this year's cycle to remain in first place with only Weiss Is Nice and the National Homebrew Competition remaining. Will a dark horse emerge from the NHC?

Homebrewer Paul Gatzza is the softball coach for Hop Barley and the Alers, a Boulder, CO homebrew club.



Homebrewers in Saline, MI—ground zero for Big Brew 2000.

CALENDAR

AMERICAN HOMEBREWERS ASSOCIATION

JUNE

22-24 AHA National Homebrew Competition, Second Round, AHA SCP, Livonia, MI.

Entries that passed the first round are due 6/5/00 through 6/16/00. Judging and the Awards Ceremony will take place at the AHA National Homebrewers Conference. The Homebrewer of the Year, Meadmaker of the Year, Cidermaker of the Year, Homebrew Club of the Year, and the Ninkasi Award winner will all be announced at the conference. Contact Gary Glass, AHA Administrator at (303) 447-0816 x 121, email: gary@aob.org, www.beertown.org.

22-24 AHA National Homebrewers Conference, Livonia, MI.

There will be a number of educational seminars and demonstrations. Speakers include Charlie Papazian, Ray Daniels, Fred Eckhardt, Larry Bell, and other distinguished brewers and beer writers. Events include homebrew sampling, a pig roast, and the NHC Awards Banquet. Contact Paul Gatz, AHA Director, at (303) 447-0816 x 122, email: paul@aob.org, www.beertown.org.

JULY

2 Mother Lode Fair, AHA SCP, Sonora, CA.

Entries due 6/17/00 with \$5 entry fee. Bill Neilson at (209) 533-0360, email: neilson@sonnet.com.

8 Oregon State Fair, AHA SCP, Salem, OR.

Entries due 6/30/00 with \$5 entry fee. Contact Curt Hausam at (503) 585-1627 (h) (503) 378-0774 (w), email: Biersudz@aol.com, www.fair.stat.or.us/winebeer.html.

15 6th Annual Commander SAAZ Interplanetary Homebrew Blast Off, AHA SCP, Melbourne, FL.

Entries due 6/23/00 through 7/12/00 with \$6 entry fee. Contact William "Billy" Kendrick at (321) 639-7022 or email: Commandersaaz@msn.com.

15 Ohio State Fair Homebrew Competition, AHA SCP, Columbus, OH 43211.

Entry forms due 6/20/00; bottled entries due 7/10/00 through 7/14/00 with \$5 entry fee. Contact Brett Chance at (614) 771-1536 (h) or (614) 644-4126 (w), email: b.chance@expo.state.oh.us, www.ohiostatefair.com.

20

15-19 E.T. Barnette Homebrew Competition, AHA SCP, Fairbanks, AK. Entries due 7/5/00 through 7/12/00 with \$5 entry fee. Contact Scott D. Stihler at (907) 474-2138 (h) or (907) 474-5450 (w), email: stihlerunits@mosquitonet.com, www.mosquitonet.com/~stihlerunits/Scott's%20Den/Beer%20Items/BeerEvents/BeerEventsIndex.html.

22 Mt. Brewer Open 2000, AHA SCP, Huntington, WV. Entries due 7/8/00 - 7/15/00 with \$4 entry fee. Contact Jeff Boggess at 304-757-0337 (h) or 304-744-7535 (w), email: Brudn@aol.com.

AUGUST

5 5th Annual Amateur Home Brew Competition—Montgomery County Agricultural Fair, AHA SCP, Gaithersburg, MD. Entries due 7/29/00 with \$5 entry fee. Contact Bill & Patricia Lawrence at (301) 963-9314, email: billyl@erols.com, http://members.tripod.com/~G_A_B_S.

5 Wild Brew Two, AHA SCP, Tulsa, OK. Sponsored by the Fellowship of Oklahoma Ale Makers (F.O.A.M.). Entries due 7/1/00 - 7/31/00 with \$5 entry fee for AHA club members and \$8 for non-members. Contact Jeff Swearengen at 918-268-8395, email: tswearengin@TAASCFORCE.com, http://frontpage.webzone.net/dcm/foam.htm.

6 Best of Big Brew AHA Club-Only Competition, AHA SCP, Baltimore, MD. Hosted by the Cross Street Irregulars Homebrew Club. AHA Registered Clubs may enter their best version of this year's Big Brew, Nearly Nirvana Pale Ale. Clubs that place, will receive points towards the 2001 Homebrew Club of the Year Award. Entries due 7/17/00 - 7/31/00 with \$5 check made out to the AHA. Contact Richard Truelove at 410 523-5279, email: rtruelove@worldnet.att.net, www.beertown.org/AHA/clubcomp.htm.

9 San Mateo County Fair Amateur Homebrew Contest, AHA SCP, San Mateo, CA. Entry forms due 7/8/00, entries due 7/21/00 through 7/22/00 with \$4 entry fee. Contact Lizett Llamas at (650) 574-3247, email: info@smexpo.xo.com, www.sammateoexpo.org/fair.

12 Evergreen State Fair, AHA SCP, Monroe, WA. Entries due 7/31/00 through 8/9/00 or 8/5-8/6 for mail-in entries. There is no entry fee. Contact Steve Titterness at (360) 653-5168 (h) or (360) 658-9577 (w), email: ESF-Beverages@homestead.com, http://ESFCompetition.homestead.com.

12 NYS Fair Home Brew Competition in Conjunction with the Salt City Brew Club, AHA SCP, Syracuse, NY. Entry forms and fees due 7/21/00, beer due 7/28/00. Entry fees are \$6 for the first and \$4 for each additional entry. Contact Russell Marquart and Jeff Hopson at 315-487-7711, email: agsuite@nysnet.net, www.nysfair.org.

18-20 12th New Mexico State Fair ProAm Beer, Mead & Cider Competition, AHA SCP, Albuquerque, NM. Entries due 7/24/00 through 8/5/00 with \$5 entry fee. Contact Guy Ruth at (505) 294-0302 (h), email: guyruth@abq.com, www.angelfire.com/nm/DukesofAle/NMSFProAm.html.

27 Western Washington Amateur Beer Competition, AHA SCP, Puyallup, WA. Competition takes place at the Western Washington Fair. Entries due 8/19/00 with \$4 entry fee. Contact Grace Nilsson at (253) 845-9791, www.thefair.com.

SEPTEMBER

9 6th Annual Brewer's Dream Homebrew Competition, AHA SCP, Libertyville, IL. Entries due 8/19/00 - 9/2/00 with \$5 fee, \$4 each for 4 or more, \$3 for club members. Contact Roger Grum at 847-234-5809 (h) or 847-295-6000 (w), email: roger@iconnect.net, www.clubbob.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 September/October 2000 Issue (Vol. 23, No. 5), information must be received by July 7, 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.

23 Pacific Brewers Cup, AHA SCP, South Bay L.A. County (location tbd), CA. Entries due 8/28/00 - 9/9/00 with \$6 entry. Contact Steven E. Fafard at 310-373-1724 (h) or 310-727-4261 (w), email: sfafard@compuserve.com, www.strandbrewers.org/pbc.

23 West Hundred Open, AHA SCP, Chester, VA. Entries due 9/4/00 through 9/16/00 with \$6 for the first entry and \$5 for each additional entry. Contact Paul Grinter at (804) 748-0360 (h) or (804) 763-2136 (w), email: westhundredopen@beer.com, http://weekendbrewer.com/clubpage.html.

26-30 Mid South Fair, AHA SCP, Memphis, TN. Entries due 9/15/00 through 9/22/00. There is no entry fee. Contact John Mornaville at (901) 682-5042 (h) or (901) 495-8733 (w), email: john.mornaville@autozone.com, www.memphisbrews.com.

OCTOBER

5-7 Great American Beer Festival®, Denver, CO. Members only session on the afternoon of Saturday October 7. For more information: phone (303) 447-0816, email info@aob.org, www.gabf.org.

7 Heritage Days Fish & Brew Contest, AHA SCP, Forks, WA. Entries due 6/30/00 - 9/15/00, no entry fee. Contact Al Barr at 360-374-6310 (h) or 360-374-3141 (w), email: akbarr@olympen.com.

20-21 17th Annual Dixie Cup, AHA SCP, Houston, TX. Entries due 10/6/00 with \$6 per entry; entries received between 10/7/00 and 10/13/00 will be charged \$10 per entry. Contact Bev Blackwood at (713) 432-1248 (h) or (713) 348-5925 (w), email: bdb2@bdb2.com, http://www.crunchyfrog.net/dixiecup/.

• KUDOS •

AHA SANCTIONED
COMPETITION PROGRAM

• SEPTEMBER 2000 •

Pacific Brewers Cup

Los Angeles, CA—Dave McMullen of El Cerrito, CA won best of show.

• FEBRUARY 2000 •

"My Barley Doesn't Whine"

Barleywine AHA Club-Only Competition

Tucson, AZ, 37 entries—Rob Clucas of Overland Park, KS, representing the Kansas City Biermeisters, won best of show.

• MARCH 2000 •

1st Annual Bitterroot Valley
Homebrew Competition

Hamilton, MT, 12 entries—Chris Hughes and Karen McElroy of Hamilton, MT won best of show.

Cascadia Cup 2000

Woodinville, WA, 115 entries—James Crane of Marysville, WA won best of show.

Drunk Monk Challenge

Warrenville, IL, 276 entries—Pete Kapusta and Steve Gryczynski of Elgin, IL won best of show.

Heartland Homebrew
Competition 2000

Des Moines, IA, 160 entries—Steve Piatz of Eagan, MN won best of show.

Trash X

Pittsburgh, PA, 264 entries—Keith Kost of Pittsburgh, PA won best of show.

Hudson Valley Homebrewers

10th Annual Homebrew Competition

Pine Plains, NY—Dan Adams of Pine Plains, NY won best of show.

• APRIL 2000 •

Belgian Lambic AHA
Club-Only Competition

St. Charles, IL, 23 entries—Douglas Faynor of Woodburn, OR, representing the Capitol Brewers, won best of show.

Maltose Falcons Mayfaire

Woodland Hills, CA, 165 entries—Mike Riddle of Napa, CA won best of show.

Bluff City Brewers 12th Annual
Homebrewers Extravaganza

Memphis, TN, 163 entries—John & Doran Moranville of Memphis, TN won best of show.

2nd Annual Palmetto
State Brewers Open

Columbia, SC, 75 entries—George Fix of Clemson, SC won best of show.

Crescent City Competition

New Orleans, LA, 277 entries—Russ Bee of Rockwall, TX won best of show.

9th Annual BOSS Chicago
Cup Challenge

Blue Island, IL, 140 entries—Darrell Proksa of Downers Grove, IL won best of show.

2000 Snow Goose Spring Breakup

Anchorage, AK, 24 entries—Steve Schmitt of Anchorage, AK won best of show.

U.S. Open X

Charlotte, NC, 145 entries—Al Clayson of Charlotte, NC won best of show.

5th Annual Northern Brewer
Homebrew Competition

St. Paul, MN, 198 entries—Steve Piatz of Eagar, MN won best of show.

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Hillel Norry—New York, NY
Shawn Nunley—Tracy, CA
Ryouji R. Oda—Japan Craft Beer Association—Ashiya City, Japan
Rob Oglesby—Atlanta, GA
Gordon L. Olson—Los Alamos, NM
John Orosz Sr—Bridgeview, IL
Robert Park—Sweeny, TX
Don Peteisen—Bloomfield Hills, MI
Bruce Peterson—Finlayson, MN
Bill Pfeiffer—Cork And Cap—Brighton, MI

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Mark Powell—San Angelo, TX
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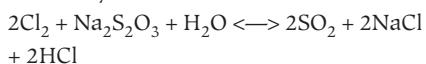
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Ara Derderian—Rancho Cucamonga, CA
Kris Kucera—Freeport, ME
Tom Mercier—Timmonsville, SC
Miami Area Soc of Homebrewers—Miami, FL
Tom Reed—Trenton, NJ
Parrish Silbernagel—Pulath, MN
Will Smith—Louisville, CO
Dan Turczyn—Eastpointe, MI
Charles A Watson—Hillsboro, OR

For Information about AHA Sponsorship, call (303) 447-0816.

Thiosulfate, Dry Yeast and Monica

Dear Professor,

I want to add a few comments in regard to using sodium thiosulfate to rid brewing equipment of residual chlorine. Mr. Rawson is entirely correct; a rinse with a 5% solution as he recommends, followed by a thorough hot water rinse, as you recommend, should get rid of any remnants of chlorine. Sodium thiosulfate, also known as sodium hyposulfite (photographic darkroom 'hypo') sodium hydrosulfite, or sodium dithionite, has been used as an antichlor in the textile and paper industries to remove traces of chlorine left over from the bleaching processes. It reacts with chlorine to produce sulfur dioxide, sodium chloride and hydrochloric acid. Sulfur dioxide is volatile and the other two are readily soluble in water. None are at all detrimental at the levels to be encountered in cleaning brewing equipment. (For those who may be unaware, sodium chloride is table salt, hydrochloric acid is a major component of stomach digestive fluids and sulfur dioxide has been used since antiquity as a disinfectant and is commonly used in wine manufacture to prevent unwanted additional fermentation, especially of sweet wines, after bottling.) The equation for the reaction of sodium thiosulfate with chlorine for those who really want to know is:



If one is not squeamish and sodium thiosulfate cannot be found either at the brew supply store or the local pharmacy, one could use good old Eastman Kodak, dry, non-hardening fixer. The good, thorough hot water rinse you recommend is mandatory regardless of the source of the sodium thiosulfate.

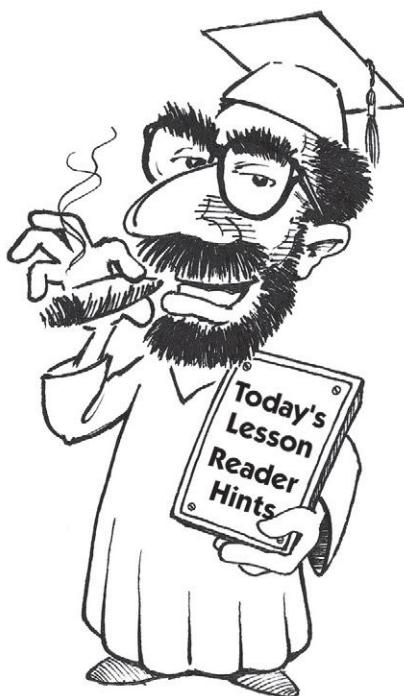
What I principally wanted to discuss is an experiment I have just completed. When I first began brewing, liquid yeasts were not commonly available. Here in Alamosa, I am

still three to five hours away from a brewing supply store which carries them and I am leery of the treatment they may receive being shipped by US Postal Service or UPS. Therefore, I have confined myself to dry yeasts, with complete satisfaction may I add, until this winter. Having read so much about how yeast affects the flavor of a beer, I acquired two ready-to-pitch varieties produced by a popular manufacturer. One purported to be a Burton-type ale, the other simply a British pale ale. I mashed up an ale of my own derivation, but which turns out to be very similar to the recipe provided by the Szamatulski's in "Clone Brews" for Bass Ale. Prior to pitching, I divided the wort into two equal parts and pitched one half with the 'Burton' yeast, the other with the 'British' yeast. The latter got started within twelve hours, the former required twice as long. I also brewed up another batch of the same recipe and pitched it with a dry yeast my brew store owner wanted me to try. Except

for the choice of yeast, all batches were treated exactly the same and attenuated to within a point or two of the same final gravities. They have been bottled for a month and my wife and I have conducted taste testing. They are indeed different, they even look different and the difference must be primarily due to the yeast. The dry yeast produced the best flavor, the "British" yeast is acceptable and the "Burton" yeast produced a thrower-outer. Curiously, the latter is a lighter color and is hazy; the other two are clear and somewhat darker. It didn't get any wild yeast contamination; there were none of the visual or olfactory indicators of it, nor do the concomitant evil flavors occur. It just simply doesn't taste good. To be sure, one trial should not be taken as conclusive, but based upon this experience, I am not going to rush out and acquire more liquid yeasts when I can get entirely satisfactory results with the much more durable dry varieties.

It should be noted that, according to the homebrewer types described by Ray Daniels (March/April 2000 *Zymurgy*), I am a beer snob with strong geekish overtones (a 'sneek' maybe?) and I don't like a number of varieties of beer which others rhapsodize over, so it well might be that there are those who would find the flavor of my "Burton" ale very refreshing.

Still on the subject of yeasts, especially the dry, I seem to have stumbled over a technique which gets them going very readily. I rehydrate in about 500 ml of solution containing a tsp of yeast energizer, three tsp of Ghostex (a dehydrated yeast hull preparation) and a tbsp of corn sugar, which has been boiled and allowed to cool to pitching temperature. Aeration is important and I had been in the habit of aerating the wort immediately prior to pitching using a hand held electric mixer for about five minutes, whipping the foam well down into the bulk of the wort. One day I slipped up and pitched the yeast before aerating. The yeast



"I occasionally use good quality dry lager yeast with excellent results. But I must also add that I also get excellent results with the various brands and strains of liquid yeasts."

got started in a few short hours and since then I have made it a habit to pitch, then aerate. My (dry) yeasts routinely get started within four hours and I get furious

activity in the fermenter, the kind of roiling action one of your earlier correspondents lamented he could not attain. Attenuation is routinely down to the quarter



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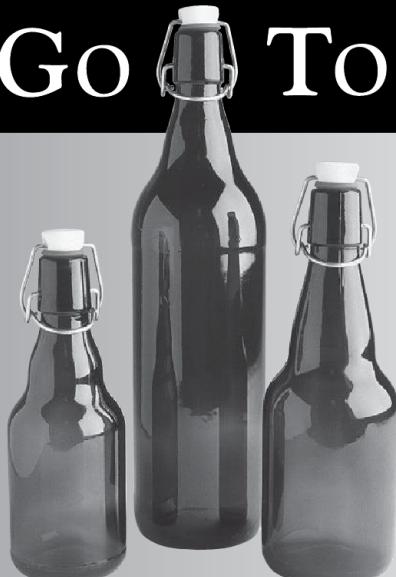
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gravity level or below, depending upon wort composition

I didn't tell you anything you didn't already know, but perhaps some of the other neophyte brewers out there might glean a nugget or two.

Sincerely,
C. Wayne Freeark, Ph.D.

Wild Willy Brewery
Prof. Emeritus, Chemistry
College of Santa Fe, Alamosa, Colorado

Dear Sir Wayne,

Thanks for all the tips. Another good source of Sodium thiosulfate is at hot tub/spa supply stores. They carry 100% pure product to scavenge chlorine in certain types of spa systems.

I'm mostly with you on your observations about dry yeast. I occasionally use good quality dry lager yeast with excellent results. But I must also add that I also get excellent results with the various brands and strains of liquid yeasts. For less hassle (but less flexibility) I wouldn't hesitate to recommend some of the quality (and somewhat pricier—quality has its cost—so you spend 2 cents more for each bottle of beer!) dried yeast available today.

I don't believe all that rigamaroll with corn sugar and nutrient is necessary for rehydrating dried yeast. All the yeast experts I've had discussions with strongly recommend only rehydrating in pure water. The added sugar creates unnecessary stress on the already shriveled cell walls as they rehydrate.

About Monica, you never mentioned it so there's nothing to answer about her.

Thanks again and keep on brewing,
The Professor, Hb.D.

The Rubber Made Me Do It

Dear Professor,

I want to use a round Rubbermaid cooler for mashing and sparging. I want to replace the plastic valve and use a brass valve with copper tubing. What's the best way to install it? Any better options or recommendations than a brass valve?

Leonard Hotham
Yahoo.com, U.S.A. (continued on page 54)

Summer Brewing

Let's Talk Heat

GOTTA GET THE TECHNICAL LINGO DOWN. HERE'S SOME HELP.

BTU = BRITISH THERMAL UNIT.

This equals the heat required to raise the temperature of one pound of water one degree Fahrenheit. In practical terms, one BTU is roughly equivalent to burning one kitchen match. Also known as 1,054 joules, 252 calories, 778 foot-pounds.



- Most air conditioners are rated in BTU/hour. Central air is rated in tons: one ton is equal to 12,000 BTU/hour.
- 8065: Approximate BTUs required to cool five gallons of wort from 210 °F to 45 °F.
- 1300: Approximate BTUs required to cool five gallons during a 10 day lager fermentation.

OFF THE MAP

If you've given up on making actual beer because of the heat, your summer brewing might work on the following:

MEAD—see the May/June issue

KVASS—low alcohol rye beverage, ferments in two days

ROOT BEER—it'll keep the kids happy

CREATIVE SODA POPS—might keep you and the kids happy

WINE—dare we say it!?



Ideas for beating the heat during fermentation:

- Water bath/wet towel over fermenter—buys you five degrees, more if air is dry.
- Hook air conditioner to box holding fermenter—10 degrees, maybe more.
- Old refrigerator with temperature controller—nearly unlimited control.



THE FREON JONES

"They're almost here, those muggy nights that smother you like a wet sponge across your mouth. When your shirt sticks to you like a hefty trash bag, and slipping between the sheets is like sliding between two slices of unrefrigerated lunch meat. When even a cool shower and handfuls of talcum powder won't ease the sticky that's got on the back of your knees and into your elbow-pits, and grime jimmies flourish on your neck like colonies of parasitic black playdough-crumbs."

AUTHOR UNKNOWN. SOURCE: [HTTP://WWW.SUPERNET.NET/~JCLARK/FICTION/FREONJON.HTML](http://WWW.SUPERNET.NET/~JCLARK/FICTION/FREONJON.HTML)

TRYING TO BE SPECIFIC ABOUT HEAT?

BY JEFFREY R. COOPER

TRYING TO BE SPECIFIC ABOUT HEAT?

Possible Yeasts for

Hot Weather:

WYEAST

- 3463 Forbidden Fruit
- 3522 Belgian Ardennes (up to 85 degrees)
- 3787 Trappist High Gravity
- 3942 Belgian Wheat
- 3944 Belgian Witbier
- 1214 Belgian Ale
- 3278 Belgian Lambic Blend
- 1007 German Ale
- 1028 London Ale
- 1275 Thames Valley Ale
- 1335 British Ale II

WHITE LABS

- WLP001, California Ale Yeast
 - WLP008, East Coast Ale Yeast
 - WLP300, Hefeweizen Yeast
- (SEE PAGE 61 FOR CAVEATS!)

WARM WEATHER

CERTAIN STYLES EXHIBIT ENOUGH ESTERS THAT WARM FERMENTATIONS MAY BE READILY TOLERATED. TRY THE FOLLOWING:

- MOST THINGS BELGIAN
- WEIZENS—USUALLY WITH A BANANA BALANCE
- AMERICAN ALES—CHICO CAN BE FORGIVING OF THE HEAT
- FRUIT BEERS
- JUST BEER—FOR THOSE WHO NEED REFRESHMENT WITHOUT THE STYLE JITTERS.



BREWS

No Beer in the Car, Either

By now we all know not to leave kids or pets in the car during the summer heat. That goes for beer too. Here's one good reason from Phoenix: In a recent test of car covers, the temperature inside an *uncovered* car reached a high temperature of 188° F—that's 84 degrees hotter than the outside maximum temperature of 104° F. Yikes!

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beat. .. THE HEAT:

BY DEANFIKAR



A TEXAS TALE ON HOW TO MAKE COOL BREWS WHEN THE WEATHER'S HOT

Fort Worth, Texas is a wonderful place to live but the weather here can be a little unfriendly at times. My fellow Cowtown Cappers and I have battled windstorms, duststorms, thunderstorms, hailstorms, and even the occasional killer tornado. The most consistent natural threat to brewing excellence for us Sun Belt brewers, however, is the omnipresent heat that bathes us for most of the year.

During July and August, fellow brewers across the country may find that their own brewing conditions start to mimic those of Texas. Fortunately, there are some things we can all do to beat the heat and avert the horrors that it would inflict

upon our brews. This article reviews the troubles we have encountered with heat and various solutions that you can employ during the hottest months of your year.

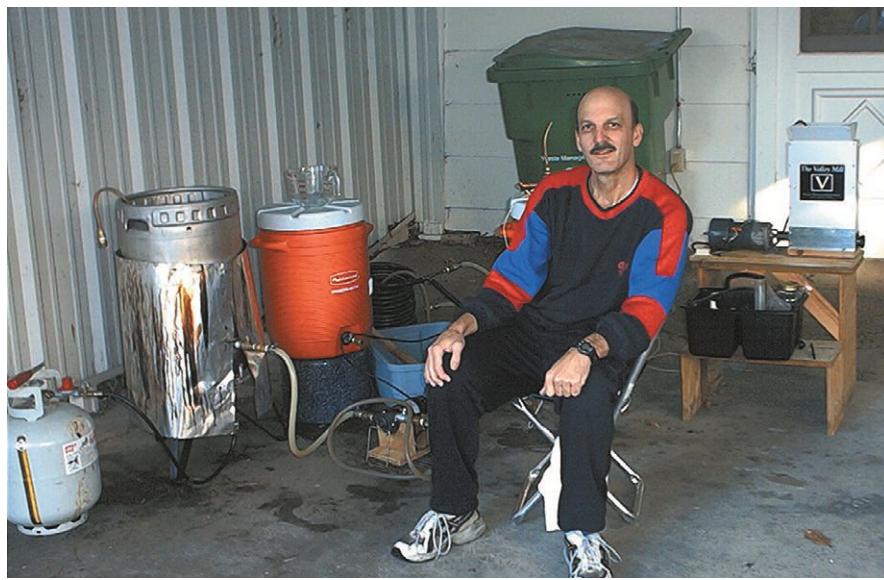
Drying Out

Some of you brew indoors and therefore you may not face *all* of the problems that we outdoor brewers have. But many of us commune with nature—or at least our neighbors—while we brew. The first effect of the elements is seen not in the beer, but the brewer!

While we Texans sometime brag about our heat, the height of summer can make the exercise of brewing a hazardous thing. Once banished to the great outdoors I

made the mistake of brewing a couple of times in the afternoon and got pretty dehydrated. This is really no laughing matter since mild dehydration can evolve into serious dehydration very quickly and should be actively avoided—especially if you are, or will, be drinking beer.

What I do now is set up my brewery after dinner the night before brew day when it is cooler. This shaves close to an hour off of my all-grain brewing day. I get up early the next morning to brew and usually finish before the hottest part of the day. If you have the whole day to play with you can put off brewery cleanup until evening or even the next morning when it is as cool as it is going to get outside.



Author Dean Fikar outfitted to brew on one of Ft. Worth's cooler days.

Wort Cooling

One dilemma I encountered during my first summer of brewing involved wort chilling after the boil. Most of us use either immersion or counterflow chillers for wort cooling, both of which are usually dependent on running tap water. My tap water temperature rises into the low 80's by July, which is a major problem since I like to pitch the yeast at around 70° F (21° C) or less. But even if your summer water temperatures only rise into the 60s, you may still have difficulty reaching your desired wort temperature.

A nifty solution to the problem is to build a "prechiller" to cool the tap water before it reaches the main chiller. What I did was take about 25 feet of 3/8" copper tubing and coil it so that it fit into the bottom of an extra ice chest I had lying around. I then connected my garden hose to the inflow side of the prechiller and hooked the outflow side to the main chiller using vinyl tubing and garden hose adapters which are available at most home improvement and hardware stores. By putting ice in the cooler around the prechiller coil I was able to lower the

temperature of the tap water before reaching the main chiller coil. If you are a kitchen brewer you can simply use the sink to hold the prechiller and ice.

If you're using an immersion chiller I would suggest not adding ice to the prechiller until wort temperature comes down to 100° F (38° C) or so. The ice won't gain you much efficiency until the wort cools some and you won't need near as much ice this way.

As useful as the prechiller method is, it won't drop the wort temperature nearly enough for pitching lager yeast. I needed to find a way to cool the wort to at least 55-60° F (13-16° C) with my immersion chiller and, for a few extra bucks, I found a pretty good solution. Using a cooler to hold the ice bath, I added a submersible pump to push ice water directly through the main chiller coil, thus eliminating the prechiller. These pumps are pretty cheap and I got mine for about \$35 at Home Depot.

An even cheaper method would be to set the cooler above the boil kettle and let the ice water flow through the immersion coil by gravity. I think, however, the few extra bucks for the pump are worth it since you can put just enough water in the bottom of the cooler to prime the pump, dump in the ice, and direct the chiller outflow back into the ice water bath. This way you do not have to keep adding water until all of the ice melts and you can be doing cleanup or something else. Again, the

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External thermostat with temperature probe.



Plastic bucket fermenter in water bath with T-shirt and small fan blowing on bucket bath.

same advice applies to start with tap water until the wort reaches 100° F (38° C) or less or else you'll need a truckload of ice!

Chilling Fiery Fermentations

Following the boil another big hot-weather headache arises: managing the fermentation temperature. Brewer's yeast can throw off all sorts of unwanted esters, fusel alcohols, and other undesirable compounds if the fermentation temperature is too high.

The first step in managing the problem is to know the temperature of the contents of the fermenter. Simple, you say, just leave a thermometer next to the fermenter and check it periodically. Well, the problem is that the actively fermenting wort can be a lot warmer than the ambient air. I have monitored this during my last 40 or 50 brews and have found that for ales the wort can occasionally be ten or more degrees warmer than the room or chamber that holds the fermenter. Fortunately, there is a simple and fairly accurate way of monitoring the temperature inside the fermenter without having to put a thermometer directly into the vessel and incurring the risk of infection.

Most homebrew shops carry inexpensive liquid crystal thermometer strips that

stick to your fermenter and give a pretty accurate indication of the temperature of its contents. I have found that they work well for glass, plastic, and stainless steel kegs. The strips have an adhesive backing that sticks permanently to the vessel. For those of you with several fermenters, like myself, one money-saving tip is to leave the paper backing on the strip and stick both ends to the fermenter with small pieces of duct tape. You can move it from vessel to vessel this way.

Okay, so now you know the temperature of your fermenting wort. How are you going to keep it cool?

My preference is to ferment in a temperature-controlled chamber, typically a refrigerator or freezer. Used refrigerators and freezers can often be had quite cheaply, occasionally even for free if you'll haul them off. If you know someone in the real estate business sometimes they can tip you off to good deals when people are moving.

If you're lucky enough to have a spare refrigerator or freezer you'll need to find a way to control the temperature since even the warmest setting is usually too cold, especially for ale ferments. An external temperature controller works quite well and can be had for around \$50 at many homebrew

shops or mail order suppliers. They generally have a plug that fits into a wall socket, a socket where you plug in your refrigerator or freezer, and a temperature sensor probe that goes inside the refrigerator or freezer. You turn the refrigerator or freezer's internal thermostat to its coldest setting, set the temperature that you want using the dial on the external controller and it turns the power to the refrigerator on and off similar to the way the internal thermostat would do. These units are designed to place a reasonable load on the compressor and they don't cycle on and off too often.

One suggestion I would make in order to fine tune the process is to tape or otherwise fix the controller unit's temperature sensor to the side of the fermenter so that the surrounding air will stay cooler when the fermentation is throwing off a lot of heat. For example, you might have the sensor sitting a few inches away from the fermenter, set at 65° F (18° C). It will then hold the fermentation chamber's temperature to about 65° F (18° C) but the fermenter contents might be up to ten or more degrees warmer. If the sensor is affixed to the side of the fermenter it will sense the heat being generated by the fermentation and lower the temperature accordingly. During one recent vigorous high gravity ale ferment, I had my sensor taped to a keg fermenter set at 66° F (19° C). During the vigorous exothermic phase I noticed that the ambient temperature of my fermentation fridge was about 55° F (13° C) while the liquid crystal strip on the fermenter read about 68-70° F (20-21° C). If the sensor had not been in contact with the fermenter I have no doubt that the contents would have gotten into the mid- to high-70's which would have been too high for style.

If you are on a tight budget but do have access to a spare refrigerator or freezer you could consider using a relatively inexpensive programmable timer like the ones that are often used for turning lights or other appliances on and off. The three-pronged heavy-duty appliance timers cost about \$10-\$12 last time I looked. The ones that have multiple small (continued on page 60)

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Maibock, Libation



of the Gods

(At Least The Randy, Half-Goat Ones)

"So you're saying the goat is just a euphemism for Satan?" I asked.

"It's conceivable," replied Dick Cantwell. I leaned in closer to hear him over the din of the raucous Saturday night crowd. "In Fasching, the old Catholic-German pre-Lent celebration, there are numerous references to the Old Horned Figure. The goat was a safer, friendlier image for brewers to use."

"Sort of a Beelzebub Lite?"

"Exactly."

I took a long swig of the pint of Ambrosia Woodruff Maibock in front of me. It was good and malty, but with more of a palate-clearing hop presence than I was accustomed to.

"How many BU's in this bad boy," I asked Dick. As head brewer of Elysian Brewing Company in Seattle, it was his baby.

"About 35," Dick replied. "It's a little hoppy for the style, but that's what happens when you live in this part of the world."

There was a vaguely pungent, herbaceous flavor to the beer. "You can really taste the woodruff," I said.

"Yeah, it's got a little bite. A lot of people mistake it for cinnamon, but it's a bit earthier."

"How much would you use for a five-gallon batch?

"Well, a little goes a long way. I'd say about a teaspoon and a half. Be sure the woodruff is dried, then put it in a bag, and add it to the secondary for a week."

Like any good homebrewer, I had to know more. "So, what's in this?" I asked.

"Well," Dick said, "it's about 85 percent two-row malt, 10 percent Munich, and 5 percent Caramalt. I use German Northern Brewer and Slovenian Styrian Golding hops. It starts at 17 Plato (1.069 SG), and finishes between four and five (1.016-1.020 SG). I do a single step mash with a protein rest. And for yeast, I use Wyeast Bavarian Lager #2207."

I had to laugh. Dick was now the second brewer I'd talked to that night who used that yeast. That night.

By Hank Stewart

"Newark, Delaware, home of the Blue Hens, sprightly nymphs, and the Maibock which garnered a gold medal at the last Great American Beer Festival."

Sufficient quantities of Maibock had almost made me forget about the impossible events that had transpired that night. There I was, in downtown Seattle, thousands of miles from my bed, where I had been peacefully sleeping only a few hours earlier.

Just Another Perfect Evening In May

It began as the kind of night that would have brought out the sonnet in Shakespeare. A full moon gently illuminated the freshly budded leaves. About as perfect as an evening in May can get.

I had just settled into a blissful slumber beside my wife when I heard a rustling in the bushes outside our open window. A voice whispered, "Friend, come hither."

I figured I was dreaming and rolled over. "Friend," the voice whispered, "I beseech thee, come hither."

I stumbled to the window. A man stood just beyond the bushes.

"Greetings, my brother," he said.

My initial thought was to turn around and call the cops, but something kept me at the window. "Who the hell are you?" I said.

"I am like you, a mere mortal sent here to wander the earth," he said.

I was trying to make sense of this statement, when I was accosted by a waft of fecund funk—a rich bouquet of earth, fur, urine, sweat, and God knows what else. An overripe aroma of Grizzly Adams sleeping off a three-day bender on a fraternity house couch.

"Seriously," I said, "who are you?"

"Very well," the man replied. "I am god of field and forest, keeper of sheep and shepherd, master of marsh and meadow, pursuer of nymph and player of pipe. I am Pan."

"Pan? As in half man, half..."

"Half man, half goat, all god," he said as he blew a few notes on the panpipes he held.

He was wearing a white T-shirt and blue jeans. Emerging from his pant cuff was a slender, furry ankle and the unmistakable shape of a goat hoof.

He must have noticed me looking, because he said, "Allow me to preemptively assuage your curiosity concerning another aspect of my anatomy." He reached into his full head of curly hair, and revealed a pair of three-inch horns.

"Arguably, my most notorious feature," he said. "And certainly the one most responsible for my behavior." He then let loose with a cackling laugh that was equal parts goat bleat and machine gun fire.

"Okay, you're Pan." I said, but I wasn't sure I believed it. "So, uh, what do you want?"

"A kindred spirit to share in the fellowship and conviviality of this magnificent night."

"What, exactly, did you have in mind?"

"Song, dance, flagons of Maibock, and, of course, congruence with some fine, young nymphs."

I decided to accept his invitation. A little song, dance and Maibock sounded pretty good—I'd leave the nymph chasing to him—besides, it's not every day you get to hit the town with a Greek god.

"Hang on, I'll be right out," I said, and quickly threw on a pair of jeans and a T-shirt. Figuring we could end up in public places, I also grabbed a bottle of aftershave.

When I came out of the house, Pan was standing in the driveway, hoofs click-clacking in a jerky little dance. He had a big, mischievous smile on his face.

"Come, Sir Henry," he said. "Adventure beckons."

"How'd you know my name?"

"I know much of you; I am, after all, a god."

"Sorry, I forgot."

"Furthermore, I know you have a great fondness for a good Maibock, so let us not hesitate any longer."

He was right. "Okay, I guess I have to drive."

"Not at all, my mortal friend. Tonight we travel on the chariot of Zeus."

"Huh?"

"Tonight, we move as we please. Our only limitation is our imaginations."

"What have you got, some sort of time machine?"

Pan let fire with the machine gun, goat-beat laugh. "Hardly, Sir Henry. I do, however, have the ability to move us about the present. And might I suggest we begin our evening at a favorite establishment of mine, Iron Hill."

"Where's that?"

"Newark, Delaware, home of the Blue Hens, sprightly nymphs, and the Maibock which garnered a gold medal at the last Great American Beer Festival."

"And you can take us there, right now?"

"As if on the wings of Pegasus."

"All right," I said, "let's rock."

Pan smiled mischievously, and put his arm around my shoulder. He began performing a crazed, manic, gyrating sort of soft-shoe—a goat dance. He brought his pipes to his lips, and played something that sounded like The Rolling Stones' "Start Me Up." Then everything went black.

A Trip To The Second Smallest State

When I came to, Pan and I were in the parking lot of the Iron Hill Brewery and Restaurant.

"And here we are, Sir Henry," Pan said. "Let us enter this fine establishment and avail ourselves of its innumerable pleasures."

We waded through the Saturday night crowd, and made our way toward the bar. Now that we were indoors, Pan's ripe aroma became more noticeable. I handed him the bottle of aftershave. "Here, splash a little of this on yourself."

"Why, pray tell?"

"Because you smell like a petting zoo."

"And you would have me smell like a common flower fairy," he said defensively.

"Look, you want to chase some women, right?"

"Indeed," he smiled and began prancing in place.

"Then put it on."

"Oh, very well," he splashed a few drops on his head. "Now, perhaps you'll accommodate me, and conjure up a couple pints of Maibock."

I ordered two pints, and handed one to Pan, who snatched it and immediately pranced over to two young women at the end of the bar.

My pint of Iron Hill Maibock was a thing of beauty—bright, golden and crystal clear. It had a malty aroma and flavor, but was well-balanced. It had a nice complexity, smooth mouthfeel, full body and a clean finish.

The bartender happened to be Mark Edelson, an Iron Hill brewer and owner. He told me all about the beer. It was made with all German malts: 75 percent Pilsner, 21 percent Munich, and 4 percent Cara-pils. For hops, it had German Perle for bittering, and Czech Saaz for finishing. It was pitched with Wyeast Bavarian Lager #2206. It was brewed with a single-step infusion mash.

"It's terrific," I said to Mark.

"Yeah, it's Brian Finn's recipe. It's the first one he created here, and it won a gold medal at the GABF."

"I can see why."

"Dan's a big fan, too."

"Dan?" I asked.

"Your buddy," Mark said, nodding toward Pan, who was at the end of the bar, signaling for four more pints.

Mark went off to handle him. A small, acoustic band played Grateful Dead tunes in a corner. The patrons looked a little on the young side, then I remembered Newark is a college town, home of the University of Delaware. Award-winning Maibock and nubile co-eds—no wonder Pan brought me here.

Mark returned and handed me a fresh pint. "Dan told me to give this to you."

All-grain Maibock

David Cinquina and Mike Connolly

Flanders, NJ

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

11	lbs German Pilsener Malt
1	lb German Light Munich Malt
1.4	HBU* Hallertau Pellets (90 Minutes)
1.4	HBU Hallertau Pellets (60 Minutes)
2.7	HBU Hallertau Pellets (45 Minutes)
1/2	oz Hallertau Pellets (15 Minutes)
1/4	oz Hallertau Pellets (at flame off)
1/2	tsp Irish Moss (15 Minutes) Wyeast Bavarian Lager Yeast

❖ Original gravity: 1.069 (17° P)
❖ Boiling time: 90 minutes
❖ Primary fermentation: 14 days
at 50° F (10° C)
❖ Secondary fermentation:
6–8 weeks at 34° F (1° C)

Brewers' Specifics

Dough in at 122° F (50° C) for 20 minute Protein Rest. Raise to 155° F (68° C) and hold until conversion is complete. Draw off 1/3 of the mash for decoction. Boil for 20 minutes and return to main mash. Should produce temp of approximately 168° F (76° C). Sparge with 5 gallons of water to collect about 7 gallons of wort.

*See page 51 on HBU calculations.



"Well," I said, "isn't that thoughtful."

"He also said you'd be paying for the round."

"Oh, well, isn't that thoughtful. Tell me, Mark, my friend Dan, is he a regular here?"

"Not really. I only see him around this time of year. I don't think he's..."

Mark was interrupted by a piercing scream. All conversation stopped, and all heads turned toward Pan and his two new "friends."

"Fuck you, you pervert," one of the women shouted. She then dumped her pint of Maibock on Pan's head. The second woman followed suit, dumping her pint on Pan, albeit sans commentary. The two women stomped away.

Sensing the glares, I got up from my bar stool, grabbed Pan by the back of the elbow, and quickly whisked him into the parking lot.

"What the hell was that all about," I asked.

"Seems those particular nymphs are not of the sporting variety," Pan replied.

"Just tell me what happened."

"Well, I was regaling them with tales of Olympus, serenading them with a little Stones number on the pipes, and plying them with the stuff of Bacchus. They were obviously smitten with my charms, and congruence appeared inevitable, so I raised the issue, only to be irrationally insulted and doused."

"What, exactly, did you say?"

"I asked them if they'd ever done it with a god. When they replied in the negative, I queried, 'How about a goat?' Then the dam burst."

"Gee, I can't imagine why. Listen, can we get out of here? I've got some questions I'd like to ask you."

"Certainly, Sir Henry. Where would you like to go?"

"I don't know. I'd love to find another good Maibock, but I don't know this area, and..."

"Say no more, I know just the establishment. And it happens to be relatively nearby."

(continued on page 58)

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THE : MCAB II
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PHOTOS BY CHERYL MORRIS

Bang! Crash! Thump! Jeff's keg tumbled onto the baggage belt. We were heading for the Master's Championship of Amateur Brewing (MCAB) in St. Louis, and we were almost there. Seven of us had gathered at the Detroit airport for the Southwest Airlines cattle call. Somehow, we had managed to get one of their "lounge" sections—six seats facing each other. Too bad you can't drink homebrew on the plane! And everything, including the precious 5 gallons of Classic American Pils, made it to St. Louis in one piece.

We were definitely looking forward to this weekend. Several of us had attended the first MCAB last year in Houston, and it had been a total blast! "The most fun I've had standing up," according to one of us. It was going to be a whole weekend of beer, brewing info, and more beer.

Here's what happened, as I saw it: arrival, dinner, beer judging, beer drinking, sleep, breakfast, beer history, beer judging, lunch, yeast presentation and panel, real ale, dinner, beer, awards, beer, beer, sleep, breakfast, brewery tour, beer, flight home.

You want it a little more slowly? Ok.

The *raison d'être* of the MCAB is to find and reward the best homebrewers in the nation. Each year, the steering committee picks 18 beer styles, one from each of the major style categories. There are 11 or 12 qualifying competitions throughout the year. The winning beer in each of the MCAB styles in each competition qualifies the brewer to enter a beer *in that style* to the MCAB final competition. The brewer may rebrew the beer if he or she wishes. Many do. A fellow brewer, who narrowly missed the best-of-show in MCAB I, brewed 7 Munich Dunkels and 5 Classic American Pilsners, so that he could pick one of each to enter.



MCAB Organizer Bob Boland congratulates St. Louis Brews member Jerry Scheel for his First Place Czech/Bohemian Pilsner.

Well, in order to judge these beers, to find the best of the best, you want to bring in a bunch of good judges. How do you do that? By having a party, er, conference, of course! Hey, it worked for me!

From the moment we walked into the ballroom to register, there was not a minute when no beer was available. The St. Louis Brews homebrew club (hosts and coordinators of MCAB II) did us proud, by brewing (as I recall) over 120 gallons of beer for the conference. Good beer.

Friday night, while the judges were slaving away, the rest of the conference attendees went on a pub crawl around St. Louis. I'm not sure who got the best of the deal, but I sure had fun judging my flight of strong French and Belgian ales. There were definitely some yummy beers in that flight.

After judging, some of us wandered down to the St. Louis Brewery and Taproom—the brewpub where Dave Miller got his start in pro brewing. The first beer was free! After a few more, bed beckoned. At least for this old fellow. My roommate didn't get in until *much* later.

Saturday morning, Henry Herbst gave a fascinating talk about the history of brewing in St. Louis. One of the 19th century brewers he mentioned was Jim Koch's great grandfather—you know, the one whose recipe Samuel Adams Lager is modeled after. Turns out that Koch's ancestor ran a place called the Schlopp Brewery. That tidbit was almost worth the trip alone!

Then, we judges went back to work. Kölsch was my pleasure this time. A nice morning tipple it is, too. We managed to

finish before the horde in the ballroom took any of the lunch. Unfortunately, while I was judging, I missed a presentation by A-B brewmaster, Steve Michalak, which dealt with application of large scale brewing techniques to small scale brewing. From all accounts, it was a remarkable presentation.

George Fix harangued us (gently) about the virtue (nay, necessity) of counting yeast before pitching. You think counting sheep will put you to sleep? You want 1 million cells per degree Plato in each ml of wort after pitching. What's that work out to? In 5 gallons of 1.040 wort, you'll need 190 billion cells. Now that's a lot of counting! As if George was not entertaining enough, AHA Director Paul Gatzka kept passing interesting imported beers around the table where I was sitting. Talk about sensory overload!

We weren't done with yeast for the day, either. After a short break, Dave Logsdon of Wyeast, Chris White of White Labs, and George Fix chaired a panel to take our yeast questions. Amazingly, they agreed with each other more than they disagreed.

Another break, and another panel followed. Pat Baker (late of Crosby and Baker), Dave Miller, Alberta and Jackie Rager, George Fix (they worked him hard, didn't they?) and Byron Burch talked about how it was, how it is, and how it might be in the homebrewing world. 'Twas a wide ranging and interesting discussion. Out in the audience, the beer continued to flow.

Next, it was time for more beer. This time, the St. Louis Brews crew rolled in the real ale taps. We had to listen to a lecture about what real ale is before we could wrap our lips around some. They had a bunch of hand pumps, including a couple homemade from "galley" water pumps, like you might find on a medium sized yacht. Pretty clever, and as one friend pointed out, they will fit in the fridge.

Finally, Jeff Renner tapped the keg of CAP (remember the keg that survived the airport baggage handlers?) A long line formed instantly. Jeff gave a little talk about the history of the style—basically this is lager beer as it was made around the turn of the century in this country. It's what Budweiser and its ilk used to be. A darn good beer, I'll tell you. By the time his talk was finished, so was the beer. I don't think I've



Fielding yeast questions at MCAB, from left to right: Dave Logsdon (Wyeast Labs), Dave Miller (Blackstone Brewery), Steve Michalak (Anheuser-Busch) and George Fix.



Tom Wolf, the Best of Show Winner, enjoys a beer with his wife Carolyn.

ever seen a keg empty that fast. Like I said, darn good beer.

After the happy hour, we reached the penultimate event—the awards banquet. This took place upstairs at the Taproom. The food was good, and there was lots of beer (are you sensing a pattern here?) Awards were presented (see sidebar for a list of the winners) and a raffle kept the rest of us waiting to see whether we would win anything. I won a nice dial thermometer with a 12 inch spike, then worried about what the airport security folks would think of it if I carried it on.

Sunday morning, those of us who could crawl out of bed took a tour of the Anheuser-Busch pilot brewery. This is one of the most bizarre breweries it has been my pleasure to visit. It's a full-blown brewery, designed for making Budweiser and similar beers, with a brew length of about 10 barrels. About the same as your local brewpub, you'd think. Except that this brewery is 10 stories high. Each floor is less than 1000 square feet. They've got everything from a small maltings to a bottling line. It's all very high tech, and it takes a big crew to run it, because each person has a single station (mash tun, boiler, etc.) At first I thought there must be a lot of running up and down stairs involved in running this brewery, but apparently not.

Sadly, after emerging from the tour into the warm Sunday sunshine, we had to head back to the hotel to get our bags and then it was off to the airport for the trip home. We said goodbye to old friends and new, had a couple more beers (who wants to carry them back home?) in the hotel lobby, and left with good memories of a great weekend.

Winners List

Master's Championship of Amateur Brewing II

Classic American/Pre Prohibition (BJCP 1D)

*First Place Dave Sapsis, Bay Area Mashers
Second Place Curt Hausam, Oregon Brew Crew
Third Place George Fix, Texas Brewers Association*

Czech/Bohemian Pilsner (BJCP 2A)

*First Place Jerry Scheel, St. Louis Brews
Second Place Ted Hausotter, Strange Brew
Third Place George Fix, Texas Brewers Association*

Kolsch (BJCP 3D)

*First Place Jim Layton, North Texas Homebrewers Association
Second Place Mike Riddle, Homebrewers of Marin and Elsewhere
Third Place John Tyler, Toronto, Ont.*

Strong Bitter (BJCP 4C)

*First Place Roger Whyman, Unfermentables
Second Place Brian Cole, Mountain Ale and Lager Tasters
Third Place Steven Olson & Donna Norby-Olson, Society of Oshkosh Brewers*

Strong & Scottish Ales,

Strong Scotch Ale (BJCP 5, 11B)

*First Place Donald Sajda, Kukendahl Grain Brewers
Second Place Curt Hausam, Oregon Brew Crew
Third Place Jim Layton, North Texas Homebrewers Association*

American Pale Ale (BJCP 6B)

*First Place John Childs, Lynnwood, WA (repeat MCAB winner!)
Second Place David McMullen, Bay Area Mashers
Third Place Ken Brown, Freemont, CA*

California Common/Steam (BJCP 6C)

*First Place Dean Fikar, Cowtown Cappers
Second Place Mike Riddle, Homebrewers of Marin and Elsewhere
Third Place Dan Diana, Portland, OR*

India Pale Ale (BJCP 7)

*First Place Roger Whyman, Unfermentables
Second Place Jim Boudreault & Ed Boudreault, Dead Yeast Society
Third Place Joe Formanek, BUZZ, IL*

Vienna (BJCP 9B)

*First Place Scott Boeke, North Augusta, SC
Second Place Mike Porter, Kansas City Bier Meisters
Third Place Mark Norbury, Capitol Brewers*

American Brown (BJCP 10D)

*First Place Joe Formanek, BUZZ, IL
Second Place David McMullen, Bay Area Mashers
Third Place Steve Capo & Charles Vallenrat, Foam Rangers*

Barleywine (BJCP 11D)

*First Place Tom Wolf, Maltose Falcons
Second Place Ron Thomas, Capitol Brewers
Third Place Len Lemieux, Boston Wort Processors/South Shore*

Imperial Stout (BJCP 11C)

*First Place Mike Riddle, Homebrewers of Marin and Elsewhere
Second Place Steve Capo & Charles Vallenrat, Foam Rangers
Third Place Jim Wagner, Chesapeake Real Ale Brewers Society*

European Dark Lager (BJCP 12)

*First Place Mike Riddle & Dan Hagewiesche, Homebrewers of Marin and Elsewhere
Second Place Ed Miles, Pint & Pummel
Third Place Brian Cole, Mountain Ale and Lager Tasters*

Hellesbock/Maibock (BJCP 13B)

*First Place Rick Georgette, West Bloomfield, MI
Second Place Scott Keohane, Boston Wort Processors
Third Place Brett Schneider, Boston Wort Processors*

Robust Porter (BJCP 14A)

*First Place Mike Porter, Kansas City Bier Meisters (repeat MCAB winner!)
Second Place Jay Adams, Brewers United for Real Potables
Third Place Ron Thomas, Capitol Brewers*

Sweet Stout (BJCP 15A)

*First Place Pat Bannon, Jeffersonville, PA
Second Place Dan Hagewiesche, Homebrewers of Marin and Elsewhere
Third Place Joe Lindsey, Foam Rangers*

Strong Belgian & French Ales (BJCP 17)

*First Place Bob Kepler & Betsy Klits, BURP
Second Place Curt Hausam, Oregon Brew Crew
Third Place Scott Boeke, North Augusta, SC*

Lambic (BJCP 18B)

*First Place Francois Espourtieille, South Shore Brew Club (repeat MCAB winner!)
Second Place Tom Wolf, Maltose Falcons
Third Place Jay Adams, Brewers United for Real Potables*

Best of Show Finalists

Dave Sapsis (Pre-Prohibition Lager)
Roger Whyman (IPA)
Tom Wolf (Barleywine)
Mike Porter (Porter)
Pat Bannon (Sweet Stout)
Francois Espourtieille (Lambic)

Best of Show Winner

Old Smokey Barleywine
Tom Wolf of Valencia, CA
Maltose Falcons

March 24-26, 2000 - St. Louis, MO

Next year, MCAB III is supposed to be on the west coast some place. I don't know if I can make it that far, but I know I'm going to try!

Spencer Thomas has been homebrewing since 1982, when he discovered that there was no good beer to be had in Utah.

He is an active member of the Ann Arbor Brewers Guild homebrew club, on the steering committee for the Homebrew Digest email list, and a BJCP National beer judge. His previous appearance in Zymurgy was Spring 1997.

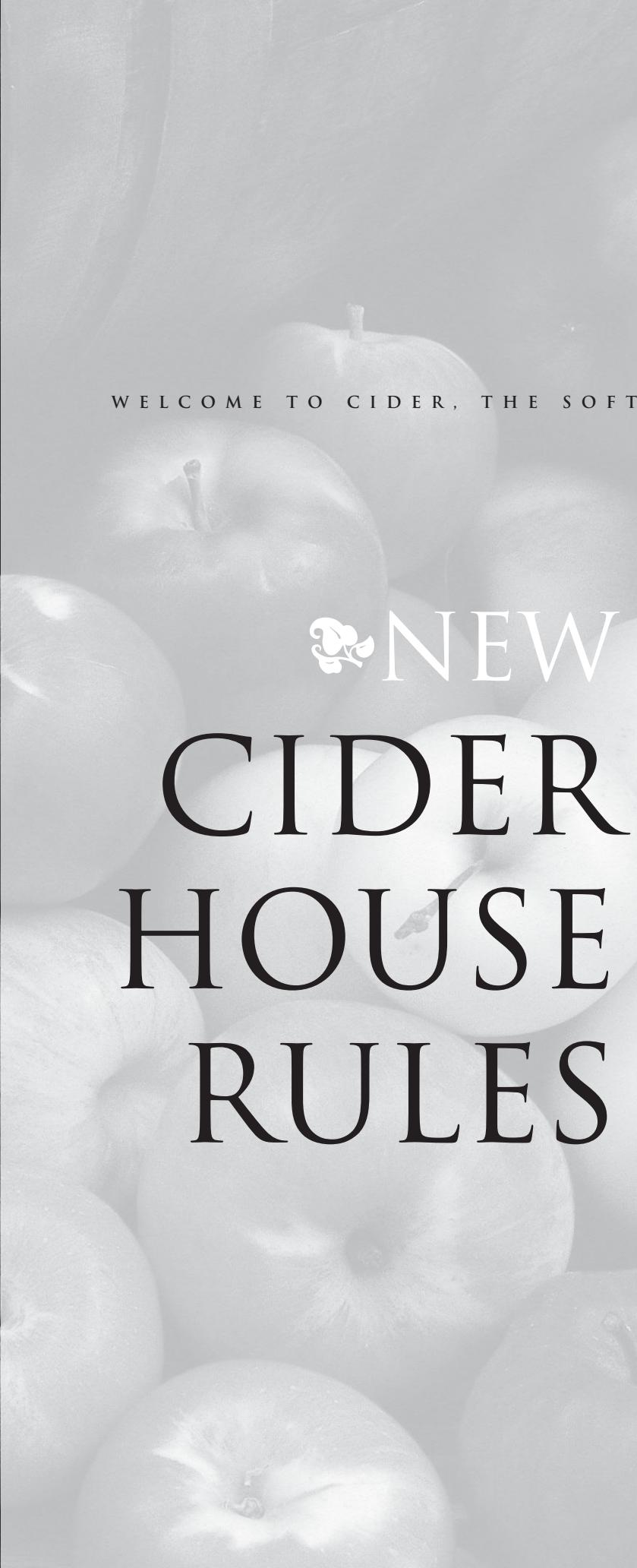


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W E L C O M E T O C I D E R , T H E S O F T E R S I D E O F H O M E B R E W I N G !

NEW CIDER HOUSE RULES

With the advent of brewpubs and microbreweries producing and serving up oodles of new beers, many bars needed a beverage with a softer side. Cider has grown to be that natural complement to malt beverages, as it appeals to the gentler sex and to the beer drinker needing a break from the heavy taste load of malt products. Here in New England, a good bar or brewpub will offer an English cider on draft or be fortunate to have a locally produced cider such as West County's or Metcalfe's on tap. Best of all: sales are up for this *other* traditional drink.

In Colonial America, cider was the beverage of choice. It was the most commonly found tavern drink and was consumed at the dinner table by young and old. Barrels and barrels were produced in cider mills all over the new land and each fall cellars were filled with them to supply and carry the establishments and families for another year. One historian determined that in 1767 in Massachusetts, the consumption of cider was approximately 1.14 barrels per capita or more than 35 gallons per person.

As time went on, the demand for cider waned. That trend was attributed to a number of factors including the population shift from farms to urban areas in the search for jobs, to growth and development of breweries, the Temperance movement and eventually Prohibition. In 1899 U.S. cider production was 55 million gallons, but by 1919 it was a scant 13 million gallons. Just a decade ago, production nationwide was down to a mere 271,000 gallons, but by 1996 it buoyed up to 5.3 million gallons.

TIM'S FIREHOUSE CIDER

Adapted from *The Art of Cidermaking* by Paul Correnty with permission from the publisher, Brewers Publications.

In New England towns and villages, volunteer firefighters are as much a part of the social fabric as town meetings and church suppers. Tim Tierney is one of our unsung heroes, and he's a crackerjack cidermaker as well. His Firehouse Cider has a rich base of white and brown sugars that balance well against the spicy orange peel and cinnamon. The cider is turned by wild yeast, and the process is simple. After battling a hot blaze or rescuing a cold kitty from a tree, this is his favorite libation and one that deserves a try.

Ingredients for a stainless-steel pony keg: (7.5 gallons) (28.4 L)

- 7.5 gal (28.4 L) fresh pressed sweet cider
- 4 c (946 mL) dark brown sugar
- 4 c (946 mL) cane sugar
- 1 jar (approximately 2 oz (57 g)) dried, grated orange peel
- 2 tbsp (29.6 mL) ground cinnamon

Put all the sugars, dried orange peel, and cinnamon in the keg. Pour in the sweet cider until the keg is filled to the bunghole and cover with plastic wrap to keep out vinegar flies. In a few days, when the cider starts working, remove the plastic wrap and let the cider do its thing. Wipe down the sides of the keg daily with sanitizing solution and paper towels. In a few weeks, as primary fermentation slows and the cider ceases foaming up and out of the keg, wipe the inside of the bunghole carefully and attach a fermentation lock.

Leave the cider alone until March or at least two months after CO₂ stops blub-blub-blubbing through the air lock. Rack the cider off the sediment into a clean sanitized container. Boil and cool three-fourths cup (177 mL) cane sugar and two cups (473 mL) water and add the resulting syrup to the cider. Siphon the cider into sanitized sixteen-ounce bottles and cap. Let the hard cider carbonate and mellow for at least two months before enjoying. As a tribute to those who risk their lives for us, raise your first glass of Firehouse Cider to firefighters everywhere.

Why the resurgence? For starters, serious hobbyists and wine makers were seeking new challenges in creating distinctive and appealing beverages. Some found their outlet in cider making and decided to go pro. Home brewers must also give themselves some credit for giving cider makers a home in AHA/BJCP competitions. This spawned further interest from brewers always ready to try something new who had heard how simple it was to make this drink. They also felt that there must be something more delectable than the sweet or one-dimensional big-brand ciders that are currently produced in the U.S. Unfortunately, some of the more successful brands utilize apple juice concentrates imported from around the world. These juices for the most part are made from dessert apples and from apples that were simply easy to process. Such apples were not selected for their ability to produce a well-balanced, inviting cider and thus the resulting product is a far cry from the ciders of England, Brittany and Colonial America. The cider race has thus begun with a lot of new frontiers to explore.

The greatest obstacle to overcome to produce good cider is a source of the right varieties of apples. It takes many years to establish an orchard of desirable apples. Our country is filled with huge stands of apple trees, but they produce for the most part dessert apples that store and ship well and stay spotlessly shiny on the supermarket shelf. However, there are many small growers who specialize in Colonial and antique varieties of apples and others who have started to include plantings of traditional cider apples as the demand for these juices have grown. Steve Woods of of Poverty Lane Orchards in Lebanon, New Hampshire is one example. His whole orchard is geared to cider apples and cider production on his quest to raise the ultimate North American cider apple to produce the ultimate single apple cider. The introduction of such classics as Roxbury Russets and Golden Russets to a grower's inventory answers the needs of hard cider makers. The juice of these apples also adds an unmistakable quality of aroma, sweetness and body to the sweet ciders which are a mainstay of many of these operations.

There are still many doors left open in cider making. Much that is still unanswered relies on the trial and error approach and then an assessment and final sensory analysis of the finished product. For the last five years, we have organized a cider conclave called Franklin County (MA) Cider Day to celebrate traditional cider making and apple growing. We have learned a lot from these gatherings and the programs conducted on Cider Day. What follows are some of the key considerations for making your first ciders or improving on your current practices and choices.

Juice Choices: Of course you can make an enjoyable cider from fresh-pressed sweet cider bought at roadside stands. (See accompanying recipe.) But the real joy of cider comes in the selection and blending of different apple varieties—and even other fruits to deliver a satisfying and unique fermented beverage.

Even if you live outside the reach of classic cider apples or some of the interesting vintage apples, you will still be able to produce excellent ciders. With a carefully selected blend of apples for the crush and a few adjustments, you can produce a good basic cider.

The choice of apples should reflect the same elements of balance found in a good wine: sugar source to ferment and base flavor, acidity, aroma and astringency. A general rule for the blend is found in Annie Proulx's and Lew Nichols' classic book, *Sweet & Hard Cider*. (See bibliography for full details.) The classic mix looks something like this:

Neutral base—30 to 60% (ex.-Baldwin, Cortland, Stayman Winesap and/or York Imperial),

Tart—10 to 20% (ex.-Cox's Orange Pippin, Jonathan, Northern Spy and/or Winesap),

Aromatic—10 to 20% (ex.-Golden or Roxbury Russet, McIntosh, Red Delicious and/or Winter Banana), and

Astringent—5 to 20% (ex.-Newtown, Reine des Pommes and/or some high tannin cultivar).

A familiarity with each apple and suggestions in cider making texts will give you the best guidance. There is lots of overlap within the four elements by some varieties and subjective factors that play into your selections. You will find that a well-balanced sweet cider usually translates well into an equally well balanced hard cider, so feel confident with your palate in determining your final blend.

The most difficult varieties to locate are the astringent types. Some crabapples may suffice, but the addition of about one teaspoon of tannin powder per five gallons of juice adds about the right level of astringency to most ciders. This addition is a must to create a balanced cider with the right feel to the finish when made from dessert apple juice. Please keep in mind that a blend of juices is important even if you have cider variety apples, as no one variety seems to have all the elements, and it adds to the complexity of the final product.

Crushing: Once you have your apples, you will want to store them in a clean dry place for several weeks while they mellow and soften. Cider makers call this "sweating" the apples. When they are ready for juicing, wash them with water, grind them into a pulp and press the juice from the pulp. Home-crushed apples generally yield two to two-and-a-half gallons of juice per bushel.

For small batches, you will crush your own. But if you—or your homebrew club—wants to buy at least 30 to 50 gallons of juice, you may arrange for a custom pressing at an apple cider mill. The best way to customize the blend is to order enough volume of juice that the cider mill will follow your exact specifications of bushels of each variety and bring the cost down in some cases less than two dollars a gallon siphoned into bulk containers. There usually is a minimum run size depending on the press. Here, depending on the variety and age of the apples, a bushel yields 2 1/2 to 4 gallons of juice. Determine the varieties available and compose your blend using the guidelines mentioned earlier.

Yeasts: Some of the best ciders to win the AHA's National Cider Competition have been produced by wild yeasts. That is, the juices are fermented out by the yeasts naturally present on the fruit when it is crushed.

Probably it would be more accurate to say the yeast is actually the 'house' yeast that is found on all the surfaces of the cider mill equipment. If you choose this route, please keep in mind you will not always get consistent results as you never know what is lurking in that freshly pressed cider. A safe compromise is to use a low dose of sulfur dioxide (SO₂) in the juice—about 1/8 teaspoon of potassium metabisulphite per five gallons (this will equate to approximately 20 parts per million (ppm) of SO₂). This will suppress or kill off the weaker wild yeasts and other potential inhabitants and allow the stronger yeasts to dominate the fermentation. No further doses are needed unless you want it present for its other attributes (see below).

Ciders made with wild yeasts tend to have a nice sweet finish and have quite a complex flavor profile. But if you are after more consistent results, it would be best to utilize a cultured yeast. The most popular dry yeasts are Red Star's Pasteur Champagne and Cotes des Blanc. The champagne yeast will metabolize every molecule of sugar in your juice (it seems) and will produce a bone dry cider. If you are after fruitiness, good aroma and a chance to have some residual sweetness, use the Cotes des Blanc. It is subject to chill shock, so as you approach the level of desired sweetness, you can chill your fermentation vessel down to near freezing and rack the

cider off the yeast sediment when it settles out. This is not fool proof, but if combined with some tight filtration to eliminate all the yeast cells, you should have some sweetness in the finish.

Beyond these two standards, Lalvin dry yeasts offer other possibilities as do liquid yeasts. Wyeast's Dry and Sweet Mead yeasts have gotten considerable use with the Sweet Mead strain a star amongst sweet finish producers. Wyeast now packages a cider yeast strain that was isolated from a Brittany cider (that also contained Brettanomyces and lactics), but it is so new that there has been little or no feedback on it. Wyeast, White Labs and other yeast suppliers have a tremendous inventory of beer, wine and mead yeasts, all of which have potential for cider making.

Malo-Lactic Fermentation: One common occurrence in cider is the malo-lactic fermentation. A lactic acid bacteria, *Leuconostoc oenos* is believed to be the chief agent of this reaction, although Lactobacillus species may also play a role. These bacteria convert malic acid—the key organic acid found in apples—to lactic acid. As a result of this process, the acidity of the cider is reduced and the flavor becomes more rounded and complex. As a downside, malo-lactic fermentation can produce a soapy taste in your cider—also, it reduces the malic acid which has a sharper bite and adds to the cider's balance. (continued on page 59)

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A Moufhful in Any Language

BY GREG KITSOCK

In his essay “The Awful German Language,” Mark Twain decries the Teutonic practice of linking nouns together to form unwieldy compound words without spaces or hyphens. If he had his druthers, Twain writes, he would “require the speaker to deliver them in sections, with intermissions for refreshments.”

Bearing this in mind—and remembering to pause for breath—what do you call a Bavarian-style wheat beer that’s brewed with dark malts, fermented to an exceptional strength and bottle-conditioned?

How about, “Dunkeldoppelhefeweizenbock?” Or maybe: “hefedorpeldunkelweizenbock?”

The Privatbrauerei G Schneider & Sohn simply calls it Aventinus.

Located in the town of Kelheim, about 60 miles northwest of Munich, Schneider is the world’s largest brewery devoted solely to the production of wheat beers, with

an output of about 250,000 barrels yearly. It’s also the oldest wheat beer brewery still operating: Weizen has been produced on the premises since 1607.

Originally, the Schneider family business was based in Munich, and it was here that

Aventinus was first brewed in 1907, patterned after the strong lagers whose names end in the suffix –ator. Aventinus is of doppelbock strength, with an original gravity of 18.5 degrees Plato and an alcohol by volume content of 7.7%. The beer derives its ruddy, coppery color from a grain bill that consist of 60% malted wheat imported from France, plus pale, crystal and chocolate barley malts. Hopping is strictly for balance (only 11 IBUs), consisting entirely of bittering and aroma varieties from Germany’s Hallertau Valley.

Of course, with a Bavarian-style Weizen, the wheat is only one key ingredient. The other is a





Press release of the Aventinus launch from 1907



Manual skimming of the yeast at Schneider Brewery



special variety of top-fermenting yeast noted for its high production of phenols and esters. Among the many fermentation byproducts, the most prominent are 4-vinyl guaiacol, which has a clovelike aroma, and

iso-amyl acetate, which imitates the smell of bananas. Aventinus is full of spicy and fruity flavors. The combination of chocolate malt and typical Weizen esters sometimes reminds one of a beery banana split.

Most modern breweries use a pure yeast strain, but Schneider employs a mixture that may contain as many as ten strains, according to Matthias Neidhart of B. United International, the American importer for Schneider brands. Precise information is hard to obtain because the brewery does not allow visitors into its yeast propagation area. (The company is extremely traditionalist: according to the Schneider Website, the recipe for the leading seller Schneider Weisse is locked in a vault, with the only key entrusted to the current brewery president.)

Schneider's Weizen beers are unusual in another respect: the brewery bottle-conditions its beers with the same yeast that it uses for the primary fermentation. Most Weizen producers, notes Neidhart, ferment in the bottle with a lager yeast. Such a yeast tends to sink to the bottom of the bottle (resulting in a clearer beer), and is less likely to spark a runaway fermentation that might shatter the glass. But there is a sacrifice in flavor, Neidhart adds.

Schneider's extra efforts seem to be paying off. Michael Jackson, in his book *Ultimate Beer*, praises Aventinus for its "alcoholic warmth and layers of malty complex-

ity, balanced by clove spiciness, figgy, raisiny fruitiness, sparkle, and champagnelike acidity." In his most recent *Pocket Guide to Beer*, he awards it a perfect four-star rating.

Meanwhile, the Beverage Tasting Institute of Chicago, in a 1999 tasting of wheat beers, gave Aventinus a 96 rating (out of a possible 100) and commented. "Outstanding sweet, malty aromas with banana and floral esters. Mouth-filling sweet malts are kept light by fine-beaded, frothy carbonation."

The Schneider family deserves credit for reviving a moribund style, but they certainly didn't invent it. Brewing with wheat dates back to the ancient Babylonians. Wheat beer was quite common in Germany from the fifteenth century onwards. The famous Einbecker strong beer, from which we get our modern style bock, contained one-third wheat. In southern Germany, a royal family called the Degenbergers began brewing their own version of wheat beer in the late 1400s. Occasionally, there arose a concern that so much wheat was being diverted to breweries that there would be none left for baking bread. This, at any rate, has been suggested as one reason for the Reinheitsgebot of 1516, which cited barley as the only grain permissible in brewing.

In 1516, the Munich authorities made wheat beer brewing *verboten*, declaring that "it is neither wholesome nor nourishing, nor gives strength and vigor, but merely incites to drinking unreasonably."

But wheat beer was too popular to be extinguished. It was easier on the palate than the turbid, smoky brown beers of the era. And, because rank hath its privileges, the Degenbergers continued to brew their wheat-based beer until the last member of the family, Baron Hans Sigmund, died in 1602.

Recognizing a cash cow, the ruling House of Wittelsbacher assumed the monopoly on wheat beer production. Not only did Duke Maximilian I build a major wheat beer brewery on the site of the Munich Hofbrauhaus, but he also decreed that every innkeeper in Bavaria had to serve it or risk losing his license. Naturally, production soared. In 1626, the royal "White Brewery" was brewing four times a week; by 1705, the facility had upped the schedule to five brews per day.

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TRAVEL
BY DANA

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By the late eighteenth century, however, the brown beer of Bavaria had improved considerably, and Weizen began a long and precipitous decline. In 1798, Elector Karl Theodor of Bavaria extended wheat beer-brewing privileges to all eligible brewers in the land. The crown's facilities were gradually sold off or leased. One of the lessees was Georg Schneider I, who in 1855 commenced brewing at the Hofbrauhaus in Munich. Adjacent to the wheat beer facility was a brown beer brewery that was operating at full tilt and needed extra space. Exercising a considerable amount of foresight, Schneider agreed to vacate the premises if the royal house would relinquish its exclusive right to make wheat beer. In 1872, he got his wish.

Schneider quickly relocated to the Maderbräu brewery in downtown Munich, and soon tripled his output. He also founded a line of his own. For six generations now, the firstborn—always named George—has become a brewer. (George VII is waiting in the wings, although, being only five, he's a little young to don the mantle.)

George II died in 1890, the same year as his father. At the tender age of 20, George III took over, but he also suffered an untimely death in 1905, only 35 years old. Succeeding him was his wife, Mathilde. A woman in charge of a brewery was a rarity back then, but Mathilde did spectacularly, turning the business into the top Weizen producer in Germany. (She also lived to be 96, a longevity that the Schneider website attributes to her wheat beer consumption.) It was on her watch that the Schneider brewery introduced Aventinus.

Weizen is a hot commodity today, accounting for 32% of all beer produced in Bavaria. At the beginning of the 20th century, however, wheat beer production was only one-hundredth that of brown beer. Mathilde Schneider may have felt she needed a product extension to compete with the strong bottom-fermented beers that her rivals were famous for. In naming the beer, she took inspiration from Aventine Strasse, the address of Schneider's bottling plant. More importantly, the new beer honored historian Johannes Turmair (1477-1534), who under the *nom de plume* Aventinus penned Bavarian Chronicles,

the first complete account of his country's origins and people.

Aventinus was a humanist who cared deeply about the plight of the Bavarian peasant. In an age when capitalism was just beginning to challenge the old order, he was deeply distrustful of the new class of financiers and merchants. "Money is nowadays the only measure of worth," he lamented, "and kindness does not pay. If a thing does not bring in money, it is of no interest. If it makes money, it is all right, whatever it may be." His words might just as well be a sermon for the 21st century.

Despite his anti-business stance, Aventinus would probably have approved of what the Schneider family did: prying the right to brew wheat beer from the aristocracy and returning it to the common people. It might also be noted that Aventinus was the son of a tavernkeeper, and probably no stranger to the beers of his day.

In 1927, the Schneider family acquired their present facility in Kelheim, and after World War II moved all brewing operations there. The brewery complex is described by Jackson as "neo-Gothic," with hop wreaths over the entrance adding a homey touch. The stainless-steel brewhouse inside is fully computerized, notes Neidhart. The Schneiders have always had a penchant for modernization: the motto of former owner George V was "*Wer nicht baut, bald nicht*

mehr braut." "Who doesn't build will soon brew no more."

Unlike some large breweries that brew a Weizen and have switched to cylindroconical vessels, Schneider still uses open fermenters. The brewers believe that exposing the yeast to oxygen promotes a more vigorous fermentation. There are several other reasons why Weizen brewers might opt for the open vessels, says Ron Barchet, brewer/partner of Victory Brewing Co. in Downingtown, PA. (which produces both normal and high-gravity versions of the style). They make it easy to skim off the trub that floats to the surface, he notes. Also, the brewer can conveniently harvest yeast for the next batch. Barchet has found that when Weizen yeast is harvested from the bottom of a vessel, "you have a generation-by-generation loss of character." It's almost as though you're selecting for those cells that lack the ability to generate phenols and therefore produce a blander beer, he speculates.

Aventinus is really a small part of the Schneider portfolio. Over 95% of production is devoted to the normal-strength Schneider Weisse which is imported to the States. Other products include a filtered Kristall Weizen and a low-alcohol Leichtes Weizen (3.3% abv), which are not available here.

Finally, there is the Wiesen Edel-Weisse, which Schneider recently revived after a 57-year hiatus. "Wiese" is the German word for



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"meadow," and the reference here is to the Theresienwiese (Theresa's Meadow) of Munich where Oktoberfest is held. By law, only breweries that brew within the city limits of Munich may serve beer at the world-famous-festival. When Schneider operated a plant there, the brewery produced this hoppier, fuller-bodied version of its Weisse specifically for the Oktoberfest. In 1942, Allied bombing destroyed the Munich plant, and Schneider lost its privilege of participating in the Oktoberfest. (The building has been restored, although it functions as an

inn, not a brewery.) Neidhart persuaded the current owners to resume production of the beer for the U.S. market. The modern version of the Wiesen Edel-Weisse measures 13.85 degrees Plato, 6.3% abv, and is hopped with 18.9 IBUs worth of Hallertauer Magnum and Cascade.

Weizenbock as a style isn't exactly burning up the U.S. market, but a number of domestic breweries have attempted their own excellent versions.

AleSmith Brewing Co. in San Diego has brewed an intensely warming (8.6% abv),

fruity Weizenbock of a very pale color (only wheat malt and pale lager malt are used). The beer was brewed last September 20 and released in early December. "We wanted to introduce something light in color for the millennium parties as an alternative to champagne," says owner/brewer Skip Virgilio. The most difficult part of the brewing process, not surprisingly, was the lautering. Run-off took three hours, recalls Virgilio, compared to about 2 hours for his other strong beers and 90 minutes for his normal-strength beers.

Victory Brewing has offered a Moonglow Weizenbock, brewed with Munich and roasted malts in addition to the pale. "With the increased gravity, you get a lot more esters," says Barchet, including apple and grape in addition to the banana. While most U.S. and German breweries market this style as a winter/early spring seasonal, Victory Brewing releases its Moonglow Weizenbock in the fall. "In this country, the style isn't common enough to be associated with a particular time of year," explains Barchet. "Besides, you have breweries releasing their Oktoberfest beers in August and people are getting sick of these beers by the fall."

A few American brewers have pushed the envelope even farther by producing a wheat beer of barleywine strength. Last year, high school chums Mark Kauffman of John Harvard's Brewhouse in Washington, DC and Bob Hettmansperger of Basil T's Brewpub in Red Bank, NJ, as a lark, decided to brew a "wheat wine" using identical recipes but different equipment. The grain bill was rather simple (50% wheat malt, 50% pale malt), and hopping consisted of 60 IBUs of Tomahawk, a new high-alpha acid bittering variety. Both brewers used the Chico ale yeast (Wyeast 1056) instead of a German Hefeweizen strain, and both beers finished within a tenth of a percent of original gravity of the other (about 9% abv). Kauffman recalls that when young, the wheat wine displayed a lot of unusual esters, including apricot and Concord grape. "It greatly improved with age," he reports.

Because of their alcohol content and complexity, strong beers like these are excellent fortifiers for the cold weather. Doppelbocks at one time were especially welcome during Lent, when (continued on page 57)

AleSmith Weizenbock

Skip Virgilio worked in real estate lending for eight years but the job never really fit him. In 1989, on a road trip through Palo Alto, CA and Seattle, he experienced craft beer for the first time. Virgilio took up homebrewing, and served his first professional stint with the now-defunct Pacific Beach Brewhouse in Pacific Beach, CA. In 1995 he became president and head brewer of AleSmith Brewing Co. in San Diego, a microbrewery serving southern California. The following recipe is based on the seasonal Weizenbock that won second prize in the bottle-conditioned category for specialty beers at the 2000 Real Ale Festival in Chicago.

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

7.5 lb two-row lager malt (3.4 kg)
7.5 lb malted wheat (3.4 kg)
0.37 oz Hallertau Perle pellet hops,
9.1% alpha acid (10 g)
1 oz Tettnang Tettnanger pellet
hops, 3.3% alpha acid (28 g)
White Labs WLP 380 Hefe Weizen
4 ale yeast

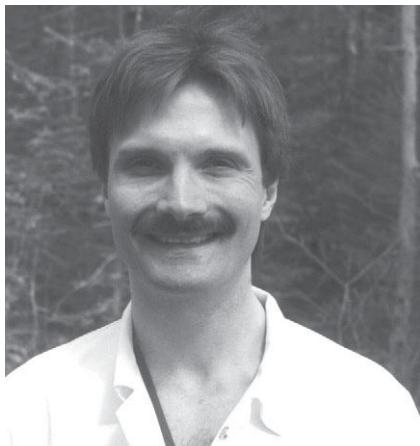
- Original specific gravity: 1.085
- Final specific gravity: 1.021
- Boiling time: 75 min.
- Primary fermentation: 7 days
- Secondary fermentation: 35 days

Brewer's specifics:

Employ a single-temperature infusion mash at 152° F (67° C). The brewer may want to use rice hulls as an aid to lautering because of the high proportion of wheat. Boil for 75 minutes. Add hops 15 minutes

into the boil. Virgilio highly recommends a yeast starter due to the strength of the beer. Pitch the yeast when the temperature cools to 66° F (19° C), then allow it to rise to 68° F (20° C) for the primary fermentation. Maintain at 40° F (4° C) for the secondary fermentation. For bottle conditioning, the homebrewer may use the same Hefe Weizen yeast, but Virgilio prefers a separate strain: the Chico California ale yeast (Wyeast 1056). "It has a neutral flavor profile, and it tends to stick to the bottom of the bottle. I prefer not to have the yeast clouding up the beer. I think it tastes better this way." Add priming sugar or kräusen, and age the bottles for four weeks.





Thomas J. O'Connor, M.D. has done it again! In this edition of Winner's Circle we'd like to honor, in addition to these intrepid brewers who have risen above and beyond the ranks of the unwashed masses by winning medals in the largest homebrew competition, one brewer in particular who seems to have a knack for winning. This year he won both first and second place in the 1999 Nationals for his ciders—the recipe for the 2nd-place spiced cider is printed here. But his brewing accomplishments extend far further: he's the reigning four-time New England Homebrewer of the Year, the reigning two-time New England Cidermaker of the Year, a winner in the final round of the AHA Nationals eight years in a row, and the only AHA Nationals final round winner to receive medals in beer, mead and cider all in the same year. O'Connor has been brewing since 1991, and does it all on his kitchen stove—no propane! Congratulations, Dr. O'Connor, and while you probably won't need it, good luck in this year's NHC.

PHOTO COURTESY OF
THOMAS J. O'CONNOR

Cider



SILVER MEDAL

AHA 1999 NATIONAL HOMEBREW COMPETITION

Thomas O'Connor III, M.D., Rockport, ME

"Rockport Spiced Cider"

Specialty Cider, Sparkling, Dry

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

- 5 gal Sewell's Orchard mid-harvest sweet cider (19 L)
 - .5 tsp (2.5 mL) each: coriander, cardamom, clove, nutmeg, all-spice, sweet orange peel
 - .25 tsp ground ginger (1.2 mL)
 - 1 tsp cinnamon (4.9 mL)
 - 5 tsp Fermax yeast nutrient (24.6 mL)
 - 4 tsp acid blend (19.7 mL)
 - 3 tsp pectic enzyme (14.8 mL)
 - 5 yeast energizer tabs
 - 1 tsp tannin (4.9 mL)
- Wyeast No. 2206 Bavarian lager yeast
forced CO₂ to carbonate

- Original specific gravity: unknown
- Final specific gravity: 0.99
- Primary fermentation: 18 months at 68° F (20° C) in glass

Brewer's Specifics

Spices added to the primary at pitching. 1 can apple juice concentrate added at racking, to keg. Kegged, filtered, force-carbonated and counter-pressure bottled.

Fruit and Vegetable Mead



SILVER MEDAL

AHA 1999 NATIONAL HOMEBREW COMPETITION

Harrison Gibbs, Los Angeles, CA

"Muscat Love"

Sparkling Pyment

Ingredients for 5 US. gal (19 L)

- 9 lb orange honey (4 kg)
- 4 lb wildflower honey (1.8 kg)
- 46 oz muscat grape concentrate
- Wyeast yeast nutrient
- Lalvin Montpellier yeast
- .5 c corn sugar (177 mL) to prime

- Original specific gravity: 1.104
- Final specific gravity: 1.048
- Primary fermentation: 2 months at 65° F (18° C) in glass
- Secondary fermentation: 2 months at 65° F (18° C) in glass

Judges' Comments

"Honey comes through; nice, complex aroma. Strange spicy flavor. Orange blossom evident. Nice balance between alcohol, sweetness and acidity."

"Good balance of orange/grape flavors. More muscat aroma would be nice."

Fruit and Vegetable Beer



BRONZE MEDAL

AHA 1999 NATIONAL HOMEBREW COMPETITION

George O. Proper, Albany, CA

"Homer's Apricot Hefeweizen"

Apricot Hefeweizen

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

- 4 lb Weizen light malt extract (1.8 kg)
 - 2 lb light dry malt extract (.9 kg)
 - .5 lb 40°L crystal malt (.23 kg) (steep)
 - 1 oz Nugget hops, 14% alpha acid (28 g) (60 min.)
 - 4 oz apricot flavor (at bottling)
Wyeast No. 1056 American ale yeast
 - 1 c corn sugar (296 mL) (to prime)
- Original specific gravity: 1.050
 - Final specific gravity: 1.020
 - Boiling time: 70 min.

Brewer's Specifics

Fermentation: two-stage, in glass.

Judges' Comments

"Good apricot character...need more wheat."

"Nicely made beer. Fruit comes through. I'd like to see a little more sweetness to balance the fruit."

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."

English-Style Bitter



BRONZE MEDAL

AHA 1999 NATIONAL HOMEBREW COMPETITION

Jeff Reilly, Houston, TX

"Boxing Cock Best Bitter"

English-Style Best (Special) Bitter

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

- 8 lb pale malt (3.8 kg)
 - .5 lb dark Munich malt (.23 kg)
 - .5 lb wheat malt (.23 kg)
 - .5 lb dark Munich malt (.23 kg)
 - .5 lb Cara-Munich malt (.23 kg)
 - .5 lb Cara-Vienna malt (.23 kg)
 - 1 oz roast barley (28 g)
 - .5 oz Target hops (14 g) (90 min.)
 - .5 oz Columbus hops (14 g) (15 min.)
 - .5 oz Eroica hops (14 g) (2 min.)
 - 1 oz Willamette hops (28 g) (15 min.)
 - .5 oz Willamette hops (14 g) (2 min.)
 - .5 oz Willamette hops (14 g) (dry, in secondary)
- Wyeast No. 1968 Special London (ESB) ale yeast
- .75 c corn sugar (to prime)

- Original specific gravity: 1.056
- Final specific gravity: 1.014
- Boiling time: 90 min.
- Primary fermentation: 7 days at 68° F (20° C) in glass
- Secondary fermentation: 7 days at 68° F (20° C) in glass

Brewer's Specifics

Mash grains at 151 to 153° F (66 to 67° C) until saccharification.

Judges' Comments

"A very well-made bitter. It leans toward being an ESB. Reduce malt and hopping a little and you will have a very nice traditional special bitter."

"A really nice beer, at the high end of the scale. Good malt and hop balance. I like the bitterness level."

Mild and Brown Ale



BRONZE MEDAL

AHA 1999 NATIONAL HOMEBREW COMPETITION

Jeff Carlson, Grand Rapids, MI

"Westside Brown"

American-Style Brown Ale

Ingredients for 5.75 U.S. gal (21.7 L)

- 8 lb pale malt (3.6 kg)
 - 1 lb honey malt (.45 kg)
 - 12 oz 80°L crystal malt (340 g)
 - 4 oz 20°L crystal malt (113 g)
 - 4 oz chocolate malt (113 g)
 - 4 oz flaked wheat (113 g)
 - .5 oz Centennial leaf hops, 9.7% alpha acid (14 g) (60 min.)
 - .5 oz Centennial leaf hops, 9.7% alpha acid (14 g) (45 min.)
 - .5 oz Cascade leaf hops, 5.9% alpha acid (28 g) (30 min.)
 - .5 oz Cascade leaf hops, 5.9% alpha acid (28 g) (15 min.)
 - .5 oz Cascade pellet hops, 5.8% alpha acid (28 g) (0 min.)
- Wyeast No. 1056 American ale yeast
- forced CO₂ to carbonate

- Original specific gravity: 1.052
- Final specific gravity: 1.012
- Boiling time: 75 min.
- Primary fermentation: 6 days at 68° F (20° C) in glass
- Secondary fermentation: 12 days at 50° F (10° C) in glass

Brewer's Specifics

Mash grains at 154° F (68° C) for 75 minutes.

Judges' Comments

"Nice clean beer. Needs higher level of aroma and bittering hops."

"Big fruitcake/dark malt nose. Wow! Pretty tasty. Needs some hops for balance."

Amahl Turczyn is the associate editor of Zymurgy magazine.

Helles in Paradise

This is not so much a story about beer encounters than it is a true tale of basic instinct. All names, situations, facts and fears have not been changed to protect anyone. This was real stuff.

1994—I'm on vacation in the Amazon. I begin in the jungle city of Manaus, where the Rio Negro and Solimão flow together to form the massive Rio Amazona.

Across the street from the world class Opera House, at the Bar do Armando this evening you will see a glorious mix of locals enjoying their beer, small food, quietly contemplating or singing merrily, pounding the tables and talking loudly. Cold Antarctica - cerveja—beer—it is ubiquitous. The high overhead fans move the humidity that hangs in the air.

A deformed 8 year old girl approaches me asking for money. A shoe shine boy works the table nearby for a few coins. I sip my beer from a short, simple glass, keeping the 700 ml bottle cool in the accompanying styrofoam insulator. Kids of all ages are looking, looking, always looking for things to enhance their existence. The floor is an Escher-like matrix of black and white tile, geometrically patterned, worn and falling off into forever. It is timeless. Next door there is a large church. The altar is dripping with candle wax. A couple inside is being married.

Here, the humidity envelopes the entire world for all those who have never left the limits of Manaus and the jungle that surrounds. Cold beer slices through the heavy atmosphere. Food; simple sandwiches, a slice of meat or cheese and bread. The singing bounces off the walls. There is a din. I lift the tip of this well-used beer bottle insulator and pour my small glass full of more beer. I begin to observe a pecking order among men. Some sit alone, while others are at the extreme end of attention, laughing



Boat and captain's home

boisterously, tale telling and calling for songs. Their voices and those of their compadres bounce off the walls. The hard wall café? There are two delightfully attractive women sitting with a group of more subdued, yet confident men at a nearby table. I have a very difficult time not staring. I top off my glass with cold beer, order another and have my shoes cleaned while I contemplate the unknown journey I have enlisted myself on. Tomorrow I venture up the Amazon River on a small houseboat with 8 other tourists whom I've never met before, signing up earlier in the day on an intentional whim.

Amazonas

The Rio Solimão (also known on maps as the upper Amazon) and the Rio Negro join at the Amazon city of Manaus. The Solimão is swift, cool, milky, muddy and neutral pH, gathering runoff waters from the Andes, while the Rio Negro is clear, but dark reddish brown in color, slow; gathering waters from thousands of springs and runoff

from flatlands to the north. With a pH of 4.5 its waters support an entirely different ecosystem. The first night I am staying on the boat captain's family floating house barge. The rivers fall and rise in annual cycles as much as 50 feet. This is the beginning of the season of rising waters. In three months the surface of the water will reach the canopy of the now towering trees. A hammock will be my "room" tonight, far up one of the countless, winding channels that meander throughout the Amazon. But I am thirsty and the full moon hangs in the clear heavy night air almost beckoning.

This night the crazy, romantic Portuguese, two Germans, our guide and myself embark into the night on a small boat. We paddle to a funky one-light-bulb floating bar and general store. Powered by a generator, the refrigerator holds cold beer for us. The man from Portugal and our guide begin shooting glasses of the local rum called cachaça. The two Germans and I delight in cold beer. The owner watches a black-and-



Barge and bar on the backwater of the Amazon

white television from his hammock beckoning us to help ourselves to the beer and keep tabs. We shoot pool. The surface is ragged. You've got to shoot hard, otherwise the ball curves. The barge sways on the wake of passing night boats. Our heads begin to swim in the eeriness of the night. The cold beer, laughter and conversation make it seem like we are the only ones on the planet.

There are Amazon crocodiles (*jacarei*) everywhere along the river. Their eyes reflect I.e.d.-like red dots from our scanning flashlights. We curiously had watched the children catching flesh eating piranhas off the house deck earlier using pieces of meat for bait. I do not delight in hearing that there are fish that swim up your ass in the Amazon. I bought an extra bathing suit in Manaus. Have a snake phobia? Don't even consider a trip here.

Dizzy, our thirst satisfied, we clamor inside our boat. It seems to have shrunk and is less stable. I notice the difference between the earlier calm of the jungle and present jungle noises. Two of us paddle, one bails. Our guide is passed out. I recall earlier in the evening we hunted for crocodiles with flashlights along the banks of the river. The bright moon offers comfort. The hammock welcomes a good night's sleep.

The next day is my birthday. It starts out with a very quick swim off the deck's end in the refreshing morning river. Very quick indeed. Unusual circumstances transpire. All of the other tourists decided to return to Manaus. I want to continue on the 4 day trip I had signed up for. Arrangements are made and I find myself alone atop the small double decker touring boat, smoking a cigar and enjoying a gloriously chilled Antarctica beer in celebration of my birthday on my way to spend two evenings in a very small riverside village in a backwater of the Rio Negro. The comfort for the time being is a pleasure. But pleasure can only be measured against degrees of discomfort, for everything in this world is relative. The beer is perfect.

Soon after arriving in the village I don my socks and sneakers. The indigenous ants I find to be vicious, sandal loving creatures. My small bundle of belongings secure in my grass roofed abode, hammock slung for bedding, I tour the village. This is my 45th birthday and I search the two small "stores" for beer. No luck here, I buy a small bottle of cachaça anticipating the pleasure of a few celebratory nips this evening.

The evening evolves to one of the most memorable and terrifying evenings I have

ever had in my life. Insanity and panic were avoided only by recalling the pleasures of beer—far, far away.

With a bottle of cachaça in tow, Elcio (my guide) and I negotiate to borrow a small wooden dugout canoe. The evening is promising. The moon is still large, its reflection beckoning a false sense of peacefulness off the backwater bay. We embark at nightfall paddling in the most unstable piece of transportation floating on the water in all of the world. Yet I am confident, having used the boat in the afternoon touring some of the backwater jungle channels. But with two of us tonight the gunnels are a mere one inch above the surface of the water. My guide sits cross legged atop the bow, paddling easily while I tend to bailing water with a small plastic cup I had fortunately located under the wooden-board seat crudely nailed to the gunnels.

30 minutes across the bay we approach the water jungle. The full moon beaming from above scattering its light through the tree canopy, we have little need for my one, small flashlight. We paddle through the canopy of trees. Calm, eerie and friendly, the warm and humid night air draws us through narrow passages, skirting trees, vines, sunken logs, thorns and the friendly songs of the night—this is really too cool! Pulling our boat ashore, Elcio had already planned our landfall, unbeknownst to me.

We walk up a small trail and find ourselves knocking on the door of a remote family home. We are welcomed. My Portuguese is not very good, but I understand the friendly intentions, the small cooking fire inside, the tea prepared by a woman and the welcoming laughter of all. Sharing my cachaça, we extend the evening to midnight before departing. I take it quite easy with the rum yet the path back to our boat suddenly develops several twists and turns I hadn't earlier recalled. It's 2 a.m. and the moon is hiding behind an unsettling cloud cover. My flashlight glows orange. Damn—the batteries are low.

I begin to develop more than just a little anxiety when Elcio tumbles entirely into the water in one smooth two-step in and out of the log we call "canoe." Miraculously he manages to (and to this day I still don't

**Neatly I tumble back into the canoe, the seat rips off
and goes flying into the darkness. My short scream is
swallowed and goes unheard.**

know how) save his cigarettes and matches in his shirt pocket.

We settle down, confident our passage through the tangled jungle and swamp will easily lead us to the bay for the direct paddle to the village. I hear noises I have never heard before, my flashlight is almost useless, and the clouds begin to thicken between us and our moon. Why have you forsaken us moon? A loud splash in the not too far distance. The last bit of energy from my flashlight beams into the ominous beyond. I see two l.e.d.-like red lights. Relax. I bail water from the dugout log. Elcio wavers and babbles something about straight ahead, no left, right—let's go that way, no it's back there... His first scream is unsettling: "Don't touch that plant," he warns me. My weak amber flashlight beam reveals a tree emerging from the water. It is about 6 inches in diameter and laced with thousands of three inch cactus-like spines. Right, like you need to tell me. The boat wedges itself between and atop various submerged objects. I cautiously place my foot on the submerged log and pull up on the seat in front of me. Neatly I tumble back into the canoe, the seat rips off and goes flying into the darkness. My short scream is swallowed and goes unheard. Momentarily we manage to slide off the mysterious and submerged dark tangle of debris. Things were going from bad to worse. Don't worry. The canoe continues to take on water. They make beer out of water. Elcio lets out a



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terrifying scream. Is he being attacked? Tree snakes? Jumping leeches? Gnawing teeth? I can't see what is happening. His screams continue. He is in pain. His right hand emerges from his crotch. It is covered with blood. Piranhas love blood. "My balls," he screams "My balls." A hanging vine of razor grass from a tree above has managed to entangle his leg, working its way up to his crotch. It slices, dices and it cuts. We've got to get out of here.

I soon realize I am in trouble when Elcio tries to piss out of the boat, but instead falls backward and briefly passes out. I realize I am in *really* big trouble when he briefly revives lying on his back and continues attempting to pee from the boat. They extracted latex from rubber trees for elastic from this jungle, but this is ridiculous. He is a mess. Me? I force my thoughts

to calming recollections. A friendly cold beer with friends—that would be really nice right now. But I compose my thoughts and I agree with myself that even sitting at my office desk with a two foot pile of "things to do," a hundred telephone calls to return, deadlines looming, a computer crash and a great deal of job related stress really sounds GREAT to me right now. My lagging beer at home I know is continuing to improve. I recover my wits. I need to deal with this situation.

I know there is a sandy shoreline to starboard—somewhere in the darkness. My directional instinct paddles me towards shore and out of the jungle. Elcio is beginning to recover. It is 3 a.m. The moon is long gone. So is my flashlight. The landscape is dim, but discernible. I'm bailing, but this time it isn't water. It's me. I'm outta here. Within 20 feet of the shore, I jump ship and wade to shore. Elcio protests in his stupor. But screw him and damn the leeches, piranhas, crocodiles, snakes, butt-fish and submerged spiked and deadly tree trunks. I'm not going anywhere until daybreak. The small strip of sandy shore amidst the jungle comforts me.

Oh the comfort of friends, conversation and a beer. I sit cross legged on the shore. The warm humid air calms me, though Elcio is protesting, confident he knows the way out. We wait until the first signs of dawn and an improvement of his sobriety. It evolves to a degree I'm comfortable with. We paddle out and within 15 minutes we reach the edge of the canopy we've been enveloped in. Across the bay and we are home. I am relieved and feel the residual adrenaline course through my tired and unraveling mind.

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.

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The hammock sways gently in the early morning hours. I quickly fall asleep, but not without first reflecting on my adventure. To this day, I still reflect: If it were beer instead of cachaça, how much more pleasant the situation could have been. Lesson learned—never offer your guide rum at night. Make mine beer! Curiously I still recall all those beer thoughts in those moments of ominous uncertainty. Strength and comfort are derived from the spirit of homebrew and the comradery of beer. I truly enjoyed my very next cold beer like no other I have ever had.

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

Helles in Paradise

This is a malty German style lager in the Munich Helles tradition, but with a greater emphasis on malt. Aromatic, cara pils and English crystal are used to achieve this emphasis. A small amount of smoked malt adds complexity without contributing a smoke character. This is surely a beer to cherish with friends and recall in dire circumstances. And if you have a batch lagering you can content yourself in knowing that things are always improving at home.

For a 6 gallon (23 liter) Mash-Extract Recipe

Malt

- 1.5 lb. (0.7 kg) German Pilsener pale malt (grain)
- 2 lb. (1.4 kg) Vienna malt
- 0.5 lb. (225 g) Belgian aromatic malt
- 0.25 lb. (113 g) Cara Pils malt

- 0.25 lb. (113 g) Bamberg German smoked malt
- 0.25 lb. (113 g) English crystal malt (15° L)
- .5 lb. (1.4 kg) extra light dried malt extract

Hops

- 0.75 oz. (21 g) German Hersbrucker-Hallertau hops (3 HBU/85 MBU) hop pellets—60 minutes (contribution of 8.7 bittering units)
 - 0.5 oz. (14 g) American Crystal hops (2.5 HBU/71 MBU) hop pellets—60 minutes (contribution of 7.8 bittering units)
 - 0.5 oz. (14 g) American Crystal hops (2.5 HBU/71 MBU) hop pellets—10 minutes (contribution of 1.7 bittering units)
 - 0.5 oz. (14 g) German Hersbrucker-Hallertau hops (2.5 HBU/71 MBU) hop pellets—10 minutes (contribution of 1.3 bittering units)
 - 0.25 tsp powdered Irish moss
 - 0.75 cup (180 mL) measure corn sugar/glucose (priming)
- Lager yeast (Suggest Wyeast Bavarian 2206, White Labs German Lager or Saflager dried lager yeast)

- Original gravity 1.048-1.052 (12 -13 B)
- Final gravity 1.014-1.018- (3.5 - 4.5 B)
- IBUs—about 21
- Approximate color: 7 SRM (14 EBC)

- Alcohol: 4.5% by volume
- Apparent Yeast Attenuation: about 71%
- Mash extraction efficiency: 83%

HBU = % alpha acid rating of hops multiplied by ounces = Homebrew Bittering Units

MBU = % alpha acid rating of hops multiplied by grams = Metric Bittering Units

A step infusion mash is employed to mash the grains. Add 5 quarts (4.8 liters) of 145° F (63° C) water to the crushed grain, stir, stabilize and hold the temperature at 133° F (56° C) for 30 minutes. Add 2.5 quarts (2.5 l) of boiling water and add heat to bring temperature up to 158° F (70° C) and hold for about 45 minutes. Then raise temperature to 167° F (75° C), lauter and sparge with 2 gallons (7.5 l) of 170° F (77° C) water. Collect about 3 gallons (11.5 l) of runoff and add 60-minute hops and bring to a full and vigorous boil.

The total boil time will be 60 minutes or long enough to end up with 2.5 gallons (9.5 l) of wort. When 10 minutes remain add the 10-minute hops and Irish moss. After a total wort boil of at least 60 minutes turn off the heat. Now you must cool all of the wort. Immerse your pot in running cold water or use a wort chiller. Then strain and sparge into a sanitized fermenter.

Pitch a good dose of healthy active lager yeast and primary ferment at temperatures of about 55° F (12.5° C); make sure that nearly all of the fermentation is complete before lagering. Rack from the primary to the secondary. Your net yield will be 5.5 gallons (21 l) to the secondary. Lager between 35 and 40° F (2 - 4.5° C) for no less than one month.

Prime with sugar and bottle or keg (use 1/3 cup of sugar for 5 gallons (21 l) keg) when lagering is complete.

World traveler Charlie Papazian is the founding president of the Association of Brewers and the author of numerous bestselling 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.

Massachusetts May Lift Beer and Bowling Ban

While most of us consider beer drinking as compatible with bowling as it is with golf, darts or horseshoes, Massachusetts bowlers have long been denied this seemingly God-given right—as of 1962, a ban went into effect making it illegal to drink beer in bowling alleys. The idea was to keep the institution of the bowling alley family oriented (so that the kids couldn't quaff your brew while you pondered that seven-ten split.) You could still enjoy a cold one in a lounge area, but apparently any alcohol leaving those designated drinking locations was forbidden. Soon, however, it looks like beer may very well find its way back on to Massachusetts lanes—both houses of the state legislature have passed a bill legalizing

the consumption of alcohol at bowling alleys. While the governor must still sign the measure, indications are good that very soon all 50 states will allow simultaneous drinking and bowling.



Foam Wars Continue in Britain

Based on the repeated complaints of pub patrons across Britain, government officials for consumer affairs are considering imposing a fine on pub owners who serve their pints with more than a five percent head on top. Owners who violate this amount of froth could be fined up to 8,000 British pounds, with recurrent violations possibly

leading to license suspension. CAMRA, Britain's real ale advocates, suggest that many pubs routinely exceed the 5% foam limit in the interests of higher profits per pint—in fact, foam sleuths hard at work keeping proprietors hon-

est reported that as many as 25% of patrons were being served too much froth. That would mean Great Britain's beer consumers paid over \$400 million for foam in 1998. Beer foam typically contains up to 40% beer.

Beer Consumption Affects Impotence? Nahhh...

A study by researcher Eric Rimm of the Harvard School of Public Health determined that alcohol, exercise and body type are all factors that may affect whether or not a man will become impotent. The new research, to be presented at the American Urological Association's annual meeting in Atlanta, included a study of nearly 2,000 male subjects. Results showed that excessive weight, too little exercise, too little alcohol or too much alcohol increased the likelihood of impotency later in life. High cholesterol levels which in turn lead to atherosclerosis, Rimm suggested, may be the culprit, as they could easily impede blood flow to the genital region just as they impede blood flow to the heart. Blood flow to the genital area, as proven in similar previous studies, is necessary for erection. One to two drinks a day has been shown to be the best alcohol consumption level for keeping the plumbing clear. But sustained, regular exercise is still the safest bet, according to Rimm, and a great way to reduce erectile dysfunction. Thanks to Rimm, doctors now have an interesting new insight into the relationship between impotence and lifestyle. It is hoped that these findings will help impotent men make changes that may improve their sex lives. And conversely, it stands to reason that should you for some reason not want to father children, you have a few interesting alternatives. Why get your tubes tied if you can sit around watching the sitcoms with a double bacon cheeseburger? And the potential for

saving money is enormous. Just weigh the costs: drinking a six-pack a day versus raising a few children. Besides, if you change your mind, there's always Viagra.

CDC: Beer Tax Hike Could Reduce Gonorrhea

The U.S. Center for Disease Control and Prevention has determined that alcohol consumption has been linked to "risky sexual behavior" in American youth. Government researchers released a report suggesting that raising the tax on a six-pack of beer by 20 cents could reduce gonorrhea by up to 9 percent. The study tracks changes in alcohol policy and the number of gonorrhea cases from 1981 to 1995. Following beer tax increases, and when states hiked up their drinking age limits, gonorrhea rates among young people most often dropped. The CDC also stated that since alcohol affects judgement, young people were much more likely to engage in sex without protection, with high-risk partners, or with multiple partners. The 20 cent increase per six-pack estimate came from the CDC's analysis of gonorrhea drop rates following different tax increases. After a 16 cent per gallon increase in California in 1991, for example, (which is about 9 cents per gallon) the CDC cited a 30 percent gonorrhea rate drop in the 15 to 19 year old age group. Various states raised beer taxes 36 times during the course of the study. The CDC claims that tax increase strategies "could have a significant impact in reducing sexually transmitted diseases among young people." However, according to the Beer Institute in Washington, declining gonorrhea rates may more likely be the result of safe sex campaigns and an increase in sex education programs. Increasing the price of beer to change the sexual behavior of young people, the Institute said, is "absurd." Oddly



enough, in both age groups, men seem to be more affected than women by higher beer prices.

Beer Drinking Elephants Trample Villagers

According to an Associated Press report, four people were trampled to death and six were injured when drunken wild elephants tore through a village in India. According to a local expert, the herd of 15 elephants was apparently after rice beer fermenting in casks inside a cluster of thatched huts. The elephants drank enough of the brew to intoxicate them, whereupon they went on a rampage, trampling to death a village family of four. The village of Prajapatibosti, 180 miles east of Gauhati, is in northeastern Assam, where at least 100 people have been killed in elephant attacks in the last year. The total population of elephants in Assam is estimated to be 5,000, though human encroachment and shrinking forest space continue to threaten them.

Big brew 2000 American Pale Ale

Brewrat Escapes Injury and Possible Death Thanks to Big Brew

A member of the online Brewrats homebrew club escaped injury on National Homebrew Day because he was out making beer as a part of the nationwide "Big Brew" program. The rat known as "Bear" and hailing from an undisclosed part of Florida filed this report online:

"Good evening Rats. I finished loading my [stuff] up to do big brew at 3:00 am, had a beer to cool off and chill and went to sleep. Woke at 9:00, no hangover (sheer damned luck), watered my plants, and made it to our brew site only 5 minutes late, at 10:25. First one there. Cool. Brewed, and only started drinking at 11:00. Home and unloaded by 6:30, and my 10 gallons is starting to bubble. Walked into my bedroom and my ceiling had fallen in. Damn, what a lucky day. If I hadn't been doing Big Brew, I'd be dead."

So let this be a lesson to all you brewers out there: better to spend your time brewing and drinking beer than to lay around in bed all day.

Dear Professor (from page 24)

Dear Leonard,

Brass fittings are not recommended for brewing equipment due the possibility that the acidic solutions found in brewing may leach lead from the brass. But my real question is why do you want to replace the plastic valve at all? Since you only want to mash with the system, total sanitation is not critical. I can only imagine that the plastic does work but you want to upgrade. Maybe not. Maybe the plastic valve fails when hot liquor is run through it, but I wouldn't think so. So what gives? I'd rather spend the time relaxing and having a brew.

But if you use it for a hop back, with wort running through it on the way through to the chiller and then to fermentation, well then, that's another story.

Don't have much experience with what you are doing, but do not use any lead base solder if you configure any of the parts yourself. Use silver solder—food grade stuff.

I suppose we'll hear more from our readers who have dealt with this in ways that I haven't.

*Feeling Freshman,
The Professor, Hb.D.*

Attack of the Airborne Division

Dear Professor Surfeit,

I have an interesting contamination problem. For the most part it seems to affect lower gravity beers but has also hit an imperial stout I recently made. The situation is this. I brew the beer and place it in a glass carboy. As long as the beer remains on the yeast, be it one week or a month or more, all is well. But once I transfer it to a secondary fermenter, within a week this thick, white, chalky substance with large bubbles grows on the surface of the beer. There is no odd smell or anything nor does it affect the taste but it is disconcerting. It has twice got into the bottles where it floats on the surface but seems to eventually settle out some. Again I stress it seems to have no effect on the taste but is unsightly. Also it doesn't affect all of my beers. I have soaked my secondary fermenters both glass and plastic in bleach and also bio-san and have tried the iodine based sanitizers, when I have soaked them I drain them through my racking cane sanitizing it as well. Still it shows up once and only once

I transfer it to a secondary fermenter, glass or plastic. I have replaced my racking cane and my plastic secondary fermenter and bottling bucket to no avail. My local home brew shop suggested it was a yeast bloom found on wines sometimes but I have found nothing in any of my books that matches this problem. Several of my beers are good enough for competition except for this problem. If I leave the beer on the yeast until I bottle then rack directly to the bottling bucket and from there immediately to the bottles it doesn't appear at all but that rules out dry hopping or clarifying agents. I have had this problem in partial extract brewing and all grain brewing. Any suggestions???

HELP,
Wayne St.Clair,
Roanoke, VA

Wayne,

Your world. I have had the same "bloom" on my beers, but not for a long time. Curiously I'd only get this on my fruit beers, and indeed only after I racked. Just like you. The stuff is likely airborne surface yeast. You are right; it never seemed to effect my beer. In fact, yes sometimes I'd get a little surface contamination in the bottle, but the taste was reasonably stable.

But this is no way to brew. Right? Especially if you aren't brewing fruit beers. You do have a surface yeast problem. I would have suggested replacing your hoses and such. But you already did this.

Does the room you bottle and siphon in have a lot of air circulation? A lot of dust in the air? That's one way to introduce these air-yeast critters into your brew. How about the corks you use for your fermentation locks? Do they need replacing?

You've used the microorganism blasting power of household bleach and water. That is about the best you can do.

I figure that if your room and air is clean and calm then you have a piece of equipment that needs replacing. It is harboring this airborne surface yeast. You've got me stumped.

*D'oh,
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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Cult Classics: Aventinus (from page 46)

monks engaged in strict fasts and had to seek their nutrition from the liquids they consumed. Even today, the Schneider brewery holds an annual festival for Aventinus lovers on the second or third Saturday in March. Strong wheat beers, however, also have a tartness that makes them fine thirst-quenchers during the summer. Neidhart notes that in the United States, sales of Aventinus peak in July. "They couldn't believe that in Germany!" he exclaims. Neidhart himself says he enjoys Aventinus while sitting on a patio on a warm summer night, after dinner. "It's a match made in heaven."

What food goes well with Aventinus? Michael Jackson writes that he's seen this strong wheat beer used to baste roast pork knuckles, and Neidhart recommends it for marinating roast duck. The sweet, fruity flavors of Aventinus make it an excellent accompaniment to dessert as well, particularly bittersweet chocolate dishes. In his book German Wheat Beer, Eric Warner notes that Germans often drink Weizen at

breakfast, using it to wash down Weisswurst (veal sausage) and pretzels. The vitamin B content of the suspended yeast would make it a healthy way to start the day off. A stronger wheat beer like Aventinus might make a good hair-of-the-dog remedy for when you've overindulged the night before and are feeling especially depleted.

But whatever you do, don't add a lemon slice, urges Neidhart. German beer drinkers, he insists, reserve lemon for those wheat beers that lack flavor and need to be perked up. In an Aventinus, the fruit would only destroy the foam and overwhelm the subtle flavors. "Don't even mention it to Schneider!" he exhorts.

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Note: Readers interested in learning more may also want to check out the Schneider brewery's extensive website, which is accessible through www.bunitedint.com. A reading knowledge of German is helpful, but there is a wheat beer lexicon in English.

Greg Kitsock is a regular contributor to Zymurgy.

Maibock (from page 33)

"How relative?"

"Pittsburgh. Now, let us be on our way." Pan put his arm around my shoulder, piped a few bars of "Sympathy For The Devil," and again, the lights went out.

A Fart In Church

When I awoke this time, I was standing with the goat god outside a church.

"Come inside, my friend, all will be explained," Pan said.

When we got to the door, I realized this was no ordinary church. For one thing it accepted all major credit cards. Inside there were no pews or alters, but rather tables and giant copper vats. I suddenly realized where we were, the Church Brew Works. An old church that had been deconsecrated and turned into a brewpub.

Pan and I found two seats at the bar. "The brewer, Bryan Pearson, is a good friend of mine," Pan said. "He makes an inspired Maibock—won a silver medal at the last Great American Beer Festival."

"You seem to know a lot about the GABF," I said.

"Indeed, I attend every year. I find it uniquely suited to my behavioral traits. In fact, it's one of the few times I can actually blend in with a crowd."

"I believe that," I said. The bartender brought us two Mad Brewer Maibocks. They were predictably light in color, with a clean, malty nose. The flavor was sublime.

"I happen to be quite familiar with the specifications of this particular offering," said Pan. "The grain bill includes Belgian Pilsen, Munich, CaraPils and a touch of Wheat malt for head retention. For hops, he uses German Perle and Hallertauer Hersbrucker. The yeast is Wyeast Bohemian Lager #2124. He does a double decoction mash, and lagers it at least two months. The starting gravity is 17 Plato (1.069 SG), counts 28 BU's, and weighs in at approximately 7 percent ABV."

A toot of "Satisfaction" on the pipes and a goat dance later, and I was in Seattle, talking with Dick Cantwell at the Elysian bar.

"So let me ask you something," I said. "The floor is yours," Pan said. "What is it with bock and goats? I mean, I know bock is the German word for goat, and the old German story about the guy who gets knocked on his ass by a beer and blames a goat."

"Mere folklore," Pan said. "Nor is it simply a shortening of Einbeck, where the style originated."

"Then what is it?" I asked.

"Well, my friend," Pan said, "this magnificent libation is known as bock because it has the power to liberate the goat-like qualities in humans."

"Such as?"

"Such as the ability to be fully in the moment. To have all your innate desires screaming for simultaneous satisfaction and act upon them. To eat, drink, play, sing, fornicate and urinate freely and openly. To recognize that the single-minded pursuit of pleasure is a natural and noble mission."

"It's hardly coincidence that Maibock emerges when it does. For this is the season of reawakening and rediscovery, when all Zeus's creatures shed their winter coats of inhibition and emerge freshly stimulated and alive. It's the time when every man becomes part goat. It is my time."

"Now," he said, his tone becoming more immediate, "it is time for us to move on. I have one more establishment for us to visit tonight."

Discreetless In Seattle

A toot of "Satisfaction" on the pipes and a goat dance later, and I was in Seattle, talking with Dick Cantwell at the Elysian bar.

Pan (or Dan) was a regular here as well. He appreciated the mythological theme, the Maibock, and the way the general rowdiness of a live rock band "makes the nubile northwestern nymphs more susceptible to the libidinous allure of a perfectly performed goat dance."

Unfortunately, it seemed not everyone was quite so captivated. "Looks like your friend's in trouble," Dick said, nodding toward the dance floor, where Pan was in a heated shouting match with two guys who were built like linebackers.

I slapped \$20 on the bar, and, once again, whisked Pan out the door with a firm grip on his elbow.

"Another *deus ex machina*," Pan said. "You certainly have a flair for the theatrical, Sir Henry."

"Why don't you just *deus ex machina* us out of here before those gorillas decide you're worth chasing."

"Very well, I know a great place in San Francisco..."

"Wait a minute," I interrupted. "I think I'm about ready to cash out."

"But, Sir Henry..."

"Don't get me wrong, it's been quite a night."

"But there are nymphs..."

"I don't think my wife would appreciate that."

"Your wife? Was that the fine nymph bedded with you? Why, she is quite the delicious, little..."

"Watch it, goat boy."

"My apologies, Sir Henry. No offense intended."

"Perhaps it is time for you to return, however, I shan't be joining you. I have certain appetites that still require tending to."

"Well, thanks for a helluva night," I said. "Too bad I'll never be able to tell anyone about it."

"Why not?"

"Who's gonna believe it?"

"The ability to believe, Sir Henry, is what separates us from the beasts of the field." Pan paused. "Though in my case, you could argue that never really occurred." He broke into a loud, goat-bleat machine gun laugh, did a little goat dance, and blew "Jumpin' Jack Flash" on his pipes.

I found myself standing at the foot of my bed. Alone. It was still dark outside. My wife stirred in bed. "What are you doing," she asked, half asleep.

"Oh, I was just having a beer."

Hank Stewart is a freelance writer and home-brewer living in the New York City area. He does not normally cavort with gods or goats.

New Cider House Rules (from page 41)

When malo-lactic fermentation occurs, further carbon dioxide is generated by the cider. This can lead to some interesting observations, as one source reports: "In traditional cider making, this process often occurred with the advent of warmer weather in springtime and coincided with the flowering period of the trees. This gave rise to the belief that the cider and the trees were somehow working in sympathy!"¹

While some cidermakers desire a degree of malo-lactic fermentation, most do not. This type of fermentation is most likely to occur in ciders that are not particularly acidic to begin with and it is encouraged by the release of nutrients from autolyzing yeast. Thus racking your cider off its lees is important and keeping your ciders below 60° F can help. But the best way to prevent this type of fermentation—along with other unwanted bacterial effects—is through the use of sulfur dioxide.

Sulfur Dioxide: As stated earlier, the presence of free sulfur dioxide in your cider will suppress or eliminate other yeasts and competitors for the sugar and fermentation by-products. The other bonus of its presence is that it serves as an antioxidant which reduces the browning of the cider (although the browned material will settle out of solution eventually). By maintaining a minimum level of 15 ppm (but levels of 30 to 50 ppm would be even safer) of SO₂ throughout the life of the cider, you will reduce the possibility of a malo-lactic fermentation. Such levels are usually not objectionable, as most people cannot detect the presence of sulfur at levels of 50 ppm or less.

Pectic Enzyme: Apples are loaded with pectin. It gives the apple its cell structure and integrity. Pectic enzymes break the pectins down to increase juice extraction and color (some apples have red pulp). The best time to add either the powder or liquid form is into the pulp before pressing. Later additions may help to clarify the cider, but if aged long enough, all the solids will eventually settle out, so its need is less important.

Fermentation Temperature: The general rule of thumb is that if you want fruitiness and aromatics in your cider, ferment as cool as your yeast strain will tolerate after you have attained visible signs of a healthy

fermentation. A warmer fermentation will reduce these characteristics and produce a more vinous personality and depending on yeast strain, a drier cider. As already mentioned, cool ferments also reduce the chances of malo-lactic fermentation and interfere with other microbial contaminants that work best at higher temperatures.

Other Options: Adding fruit to your secondary fermentation can do wonders for an otherwise bland cider. We have made ciders that included peaches, raspberries, cherries and other fruits. If you are faced with a sweet cider that was made entirely from dessert apples, this may be a good route to follow. Alternately, if your cider has an off flavor that your cider making skill was unable to overcome, it may also be a clever way to mask this imperfection. Most supermarkets carry high-end juice concentrates that are perfect for this task. They are clean and without any pulp to hurt the clarity.

There appears to be a lot of new ground to be covered with cider making. Yeasts are the immediate challenge. It is hoped that more 'house' yeast strains will be isolated and made available in the future to overcome the problem of other contaminants while using the 'wild' yeast approach. With the demand for quality juices from cider varieties increasing, another layer of permutations will arise and be explored, giving cider makers other challenges in creating

some masterful ciders. But we need not forget that this is one of the easiest alcoholic beverages to produce. As Paul often says, "It's the cheapest buzz you could ever make!"

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Paul Correnty is author of *The Art of Cidermaking* and has organized and judged AHA's National Cider Competition for an eternity. Charlie Olchowski is Chairman of the AHA Board of Advisors and has read Paul's book once, but knows enough to lecture with Paul on cider making each year at Franklin County (MA) Cider Day where the pair is known as "The Click and Clack of Cider Making". It happens on November 4, 2000 this year. Visit the website at www.ciderday.org.

¹A. G. H. Lea (Editor), J.R. Piggott (Editor). *Fermented Beverage Production* Aspen Publishers, Inc. 1995. ISBN: 0751400270 p 81.

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Cardboard box with side cut out so cold air funnels past the fermenter from the window A/C unit. Box sits on sofa bed.

Beat the Heat (from page 29)

tabs on the face of the timer can produce many on/off cycles per day and, with some experimentation, you can have the unit cycle on enough to keep the inside temperature in an acceptable range, say 55-70° F (13-21° C) or so for ales. Obviously, this is pretty imprecise temperature control but the multiple daily cycles and the considerable thermal mass of 5 or 6 gallons of beer make for a reasonably stable internal temperature. I used this method myself for awhile and it worked pretty well once I calibrated the number of on/off cycles needed per day.

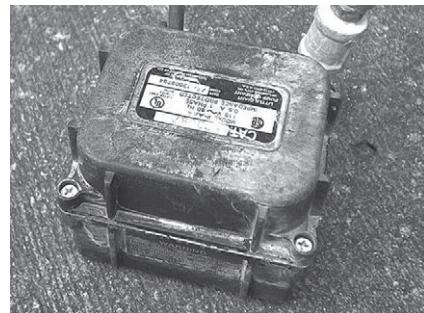
For those of you who don't have access to a dedicated refrigerator or freezer there are some other things you can do to control the fermentation. If you have a closet in the

interior of your house you might be surprised to find that it is a few degrees cooler than the rooms that have outside walls. You might stick a thermometer in there and check it after a few minutes. This may be sufficient for your needs.

Wet T-Shirts and Other Options

Many of you have heard of the "wet T-shirt" method of evaporative cooling and it is effective, especially in arid climates. For those of you who aren't familiar with this, what it amounts to is placing the fermenter in a water bath a few inches deep and either wrapping a towel around it or placing an old T-shirt over it. The key is to have the towel or T-shirt partially submerged in the water bath so that moisture wicks up along the sides of the fermenter and evaporative cooling takes place. This can be augmented with a small fan blowing on the fermenter which will enhance evaporation and thus cooling.

I have used this method with limited success, generally gaining about 3-5° F (2-3° C) of cooling. I live in a pretty humid area which limits the efficiency of evaporative cooling. I have heard anecdotal reports of brewers in drier climates who are able to achieve ten degrees or more of cooling with this method. It is worth a try if you need only a few degrees of extra cooling. One suggestion I'd offer if you try this is to put some sanitizer solution in the water bath so that it doesn't get too funky after several days of stagnation.



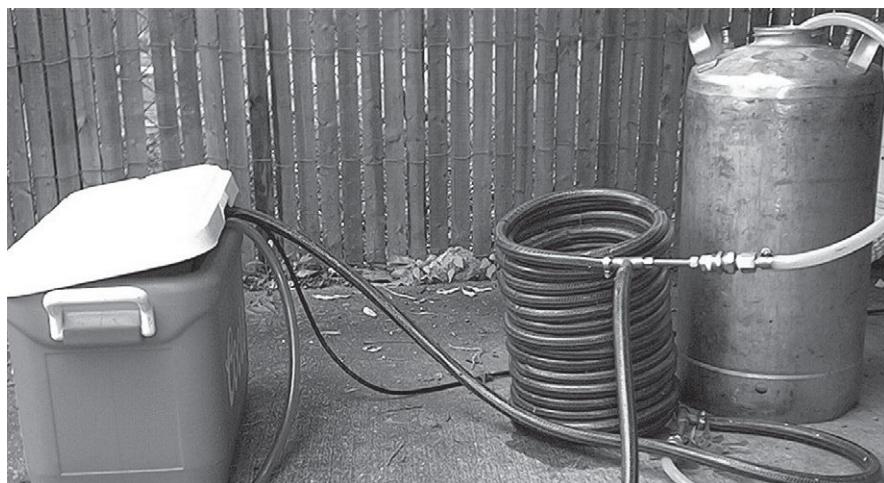
Submersible pump (Little Giant, model P-AAA) used in photo at bottom left.

Another related method I have used with better success is to divert cool air from an air conditioner vent to the fermenter. I have a wall unit in the room I use for fermentation and have rigged a cardboard box to fit over the vent, held in place with a couple of pieces of duct tape. One side of the box has been cut out and I place the fermenter next to that side so that the cool air flows past the fermenter.

This setup won't win me any awards for beauty or elegance but it took only about 5 minutes to construct and allows me to bathe the fermenter in air that is typically eight to twelve degrees cooler than the air in the rest of the room. One benefit to this setup is that I can simply fold up the box and put it in the closet when I'm through.

Those of you who have central air conditioning can rig up something similar if you have an accessible vent. I have heard of people building insulated boxes to fit over floor vents and I would think that this would work well. One thought I have had is to combine this method with the wet T-shirt approach. I haven't needed to try this yet but I would think that the effect would be additive and might be worth experimenting with if either method alone does not provide quite enough cooling for your needs.

If you're not as mechanically challenged as I am, you can find more elegant options for fermenter cooling. These projects tend to take a bit more time and effort but can be fun and also yield great results with little monetary cost. Fellow Texan Ken Schwartz of El Paso has developed an intriguing temperature-control solution. Ken has created and refined the "Son of Fermentation Chiller" which is "an insulated box that uses ice, a thermostat, and a small fan to accurately regulate the temperature of a fermenter".



Ice water bath running through counterflow chiller powered by cheap submersible pump. Water bath outflow directed back into cooler. Chiller outflow to keg fermenter.



Cornelius keg fermenter in fridge with a liquid crystal thermometer strip and temperature sensor probe both affixed to fermenter with duct tape. (Note second probe for external thermometer in small water bath on right side of picture. This is so I can see what the ambient temperature is without having to open the fridge door.)

The box can be built for \$60-\$70 dollars with all new materials or for even less with careful shopping from surplus houses and dealers, according to Ken. The chiller box will hold a 7 gallon fermenter with fermentation lock and has a separate ice chamber where you put a couple of gallon-sized ice jugs for cooling. Ken is able to achieve about a 30-degree F (17° C) drop in temperature relative to ambient air. You could even ferment at lager temperatures if the ambient air is near room temperature. Temperature control is quite good since the unit's fan cycles only as needed to move the cold air stored in the ice chamber across to the fermentation chamber.

The unit is amazingly efficient according to Ken: "with a nominally minus 15° F (8° C) differential between your wort and the outside world, you'll need to change the ice about every two days". And the unit operates off safe low-voltage DC current from an AC adapter. The low-power fan (less than two watts) and low average duty cycle make it a very efficient unit to operate. You'll probably use more energy freezing the jugs in the

freezer than you will running the Chiller! If this sounds like the sort of device you could use in your brewery then check out Ken's web page at <http://home.elp.rr.com/brew-beer/chiller/chiller.html> where you'll find details on building the box and where to find the parts.

Warm-Weather Yeasties

So what if all of this sounds like too big of a hassle or gives you scary Rube Goldberg flashbacks? Maybe your hot-weather season just doesn't last long enough to justify special additions to your brew ware collection. In all of these cases, the good news is that with proper yeast selection you can ferment at temperatures up to 85° F (29° C) (no, that's not a typo) and still be within the recommended range for some yeast strains. My advice to you would be to lose your inhibitions, forget the Reinheitsgebot for the summer, and think Belgian.

To get some ideas for summer brewing I asked two yeast gurus for their recommendations for warm fermentations (70° F (21° C) or greater).

Les Perkins, Microbiologist at Wyeast, writes as follows:

"There are quite a few options for warm weather brewing. The first that leap to mind are Belgian beers. Most Belgian strains work very well at temperatures above 70° F (21° C), some as high as 85° F (29° C). Following are some examples:

- 3463 Forbidden Fruit
- 3522 Belgian Ardennes
- (up to 85 degrees)
- 3787 Trappist High Gravity
- 3942 Belgian Wheat
- 3944 Belgian Witbier
- 1214 Belgian Ale
- 3278 Belgian Lambic Blend

"It is important to note that increased fermentation temperatures will cause an increase in esters and phenols with these strains. You will not produce a clean mild flavored beer at high temperatures, that is why many Belgian beer styles are ideal for warm temperature brewing."

"One could also use a few different ale yeasts, keeping in mind that the flavor profile will be different than if the yeasts were used at a lower temperature. It would be

best to stay with ale yeasts that have a clean, dry flavor profile. Strains like:

- 1007 German Ale
- 1028 London Ale
- 1275 Thames Valley Ale
- 1335 British Ale II"

Chris White, President of White Labs, Inc., also has some recommendations for his company's products:

"WLP001, California Ale Yeast, is the best warm temperature fermentor we have. Very little esters and fusel alcohol production all the way up to 80° F (27° C). Other good strains are WLP008, East Coast Ale Yeast, and WLP300, Hefeweizen Yeast. As the temperature rises over 75° F (24° C), WLP300 produces more banana flavor esters. Some breweries like that character so much they run the fermentations at 80° F (27° C)."

I can personally vouch for two of these recommendations. Last summer I brewed a nice clean American pale ale with White Labs WLP001 strain at about 72-73° F (22-23° C). I later brewed a Belgian pale ale with Wyeast's 3787 strain at 73-75° F (23-24° C) and was able to achieve a pleasant level of esters and a seductive yeasty aroma. Both beers were wonderfully refreshing and perfect for quaffing in the late summer heat.

No Excuses!

As a regular reader of brewing-related Internet discussion groups I see too many comments from brewers saying, "I can't wait until fall so I can start brewing again". If you are this type of "seasonal brewer" I hope I've convinced you that, with just a little extra planning and flexibility, there's no reason to stop brewing when the mercury rises.

Dean Fikar has been beating the heat in Ft. Worth, Texas ever since he took up the hobby of brewing three years ago. By all indications, he's been doing a pretty good job of it as well, having won more than 60 regional and national homebrewing awards including two bronzes and one gold at the AHA National Homebrew Competition finals ('98 and '99) and a gold at the recent MCAB II finals. He's a big fan of the internet for brewing education and information exchange and says that he doesn't really have a favorite beer style, that he likes 'em all!

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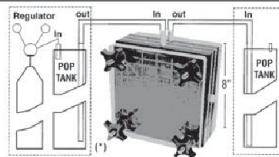
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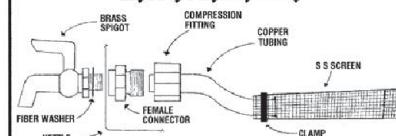
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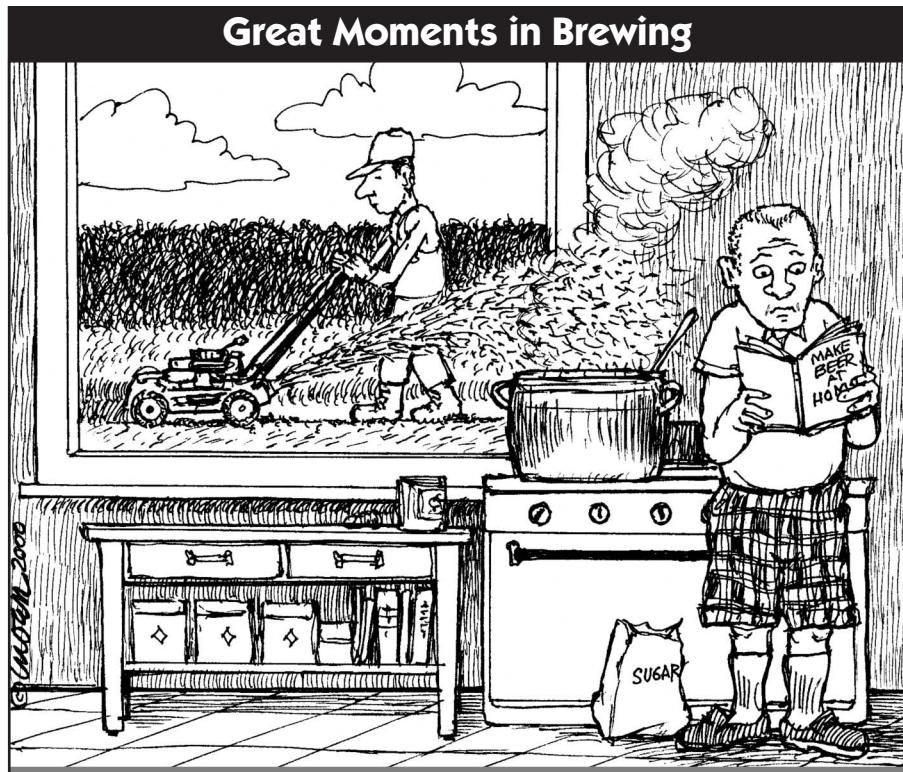


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The judges' favorite was unclear.

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