

Zymurgy

FOR THE HOMEBREWER AND BEER LOVER

Vol. 14, No. 1
Spring 1991

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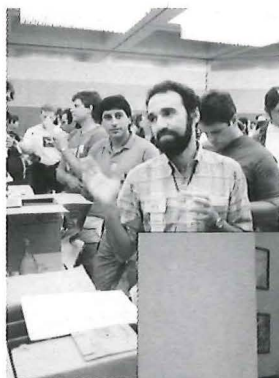
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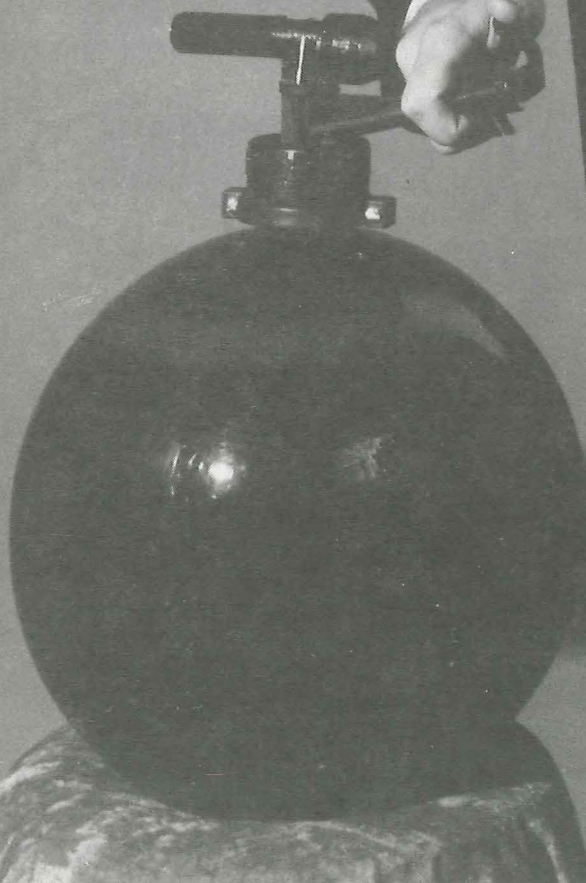
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Zymurgy

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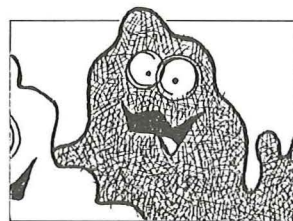
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==== Cover photo by Michael Lichter, Michael Lichter Photography. Chef/stylist: Radek Cerny. Homebrew label by Bob Gayle. ====
Shot on location at the European Cafe, Boulder, Colorado.

Zymurgy

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zymurgy welcomes letters, opinions, ideas, stories and information in general from its readers. Correspondence and advertising inquiries should be directed to *zymurgy*, Box 287, Boulder, CO 80306-0287, (303) 447-0816. All material © 1991, American Homebrewers Association. No material may be reproduced without written permission from AHA.

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THE AMERICAN HOMEBREWERS ASSOCIATION MISSION STATEMENT

To help maintain quality in the production and distribution of beer; 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.

EDITORIAL

CHARLIE PAPAIZIAN

Just Beer

or

Barley Wine Lambic Festlager



What do you call an India Pale Ale style of beer brewed with Hallertauer and Saaz hops? German Pale Ale? What if I brewed an Irish Stout, rich with roasted barley and Fuggles hop bitterness, but fermented it cold with lager yeast? Lager Stout? What if we took a recipe for Oktoberfest and spiked the aroma with the finest of East Kent Goldings hops? Would we feel inclined to brew it in February and call it English Februaryfest?

How about a top-fermented amber, brewed with three-eighths of the calories, with 20 percent wheat malt, smoked malt, cold lagering, low carbonation, finished with Finnish hops and aged in maple barrels with red-hot irons immersed into the secondary fermentation?

Or let's brew with pale malt, a little crystal malt, some yeast and ferment it in August in the spare bedroom. What shall we call it?

Just beer?

For all of the mixed-style lagers and ales we brew and enter in the National Homebrew Competition to match a competition-defined beer style, let's not forget that there are a lot of beers we brew as homebrew-brewmasters that are *just beer*. Brewed to please the brewer's fancy, this is one of the special privileges we have. What a wonderful concept in today's world. Truly independently brewed for your pleasure and

curiosity. No rules, no regulations, no standards, no musts and mustn'ts.

In the fervor of competition abounding at this time of year, don't feel left out if you've got a beer that is *just beer*, to be savored and appreciated by you and your friends and that's all you ever intended it to be. No more, no less. A well-brewed *just beer* deserves a blue ribbon every time.

And what of competitions? Which one of the 58 styles of beer in the Nationals does your beer fit into? Perhaps none. Does this mean the competition styles should be expanded? In most cases, I believe not. Just too many great beers defying style are being brewed by homebrewers. Relax and enjoy the beer as it was meant to be.

The National Homebrew Competition is not a *just beer* kind of a competition. It is a competition that measures your beer against generally accepted standards about certain world-renowned beer styles or beer types popularly brewed by homebrewers. Using available resources, its intention is to provide valuable information to the brewer and choose a "winner" representing the best efforts to brew to standards we can understand (but may not necessarily agree on).

Should there be a *just beer* style? Yes, sure, c'mon over to my house with a few and we'll evaluate them with pleasure.



DEAR ZYMURGY

OUR READERS

The Welcome Mat

Dear *zymurgy*,

I thought your editorial in the latest issue was right on. While I haven't yet been guilty of the types of arrogance you describe, I may have felt I was owed indulgence as a fellow member of a fraternity (professional brewers)—which I'm not. Your editorial put things in proper perspective.

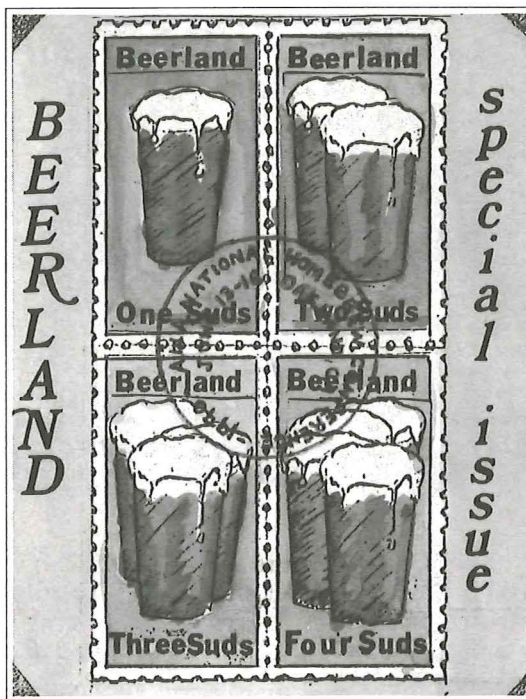
On the other hand, it's in the best interest of brewing establishments to anticipate inquisitive homebrewers' visits and prepare for them. How?

1. Knowledgeable staff. More than once I've gotten this response to a question about the brew: "I'm not much of a beer drinker. Here's the brochure." At a restaurant the staff is expected to know about the preparation of the various dishes. Isn't it reasonable to expect the same at a brewpub? And speaking of the brochure...

2. Most brewpubs have a brochure. It's usually designed to inform the layperson about the basics of the brewing process. Very worthwhile, but useless to the inquiring homebrewer. Trade secrets aside, it wouldn't hurt to give some details. Portland Brewing Co. provides a good model. They list the ingredients, OG, bittering units and alcohol content of all their brews.

As the microbrewery and brewpub movement grows, the proprietors become less like homebrewers and more like businesspeople. This is good. There will always be a wonderful symbiosis between the two. These modest proposals might help preserve it.

Art Steinmetz
New York, New York



Paul E. Wittreich, Tenaflly, N.J., sent us this label before the rates went up.

More Welcome Mats

Dear *zymurgy*,

Charlie, I just read your editorial in *zymurgy*, (Winter 1990, Vol. 13, No. 5). *Excellent!* Really made me step back and think. After all, the brewers are in "business" to brew, make money and make other people happy with their hard work. It's OK to say you enjoy the fruits of their labor but to expect anything extra because you may also brew a few gallons of beer yourself is a lot to expect and unreasonable. I don't brew for profit but for enjoyment. Still I would not like to give most of my brew away and not get to enjoy it myself. I couldn't afford it and neither can the microbrewers who are trying to make a living at it. When you look at the work involved in making five gallons it's easy to imagine just how much work it must be to brew on their scale. It's not as glorious as it sounds.

Ray Como
Chicopee, Massachusetts

No Brewing Headaches

Dear *zymurgy*,

Would you please send a pamphlet on beer making? An article in *Penthouse* said my old recipe is no good, though it sure was tasty to me. It included 5 gallons water, 1 can Blue Ribbon malt extract, 4 pounds sugar, 1 pack Fleischmann's yeast. Let bubble till it quits, add 1 teaspoon sugar to each bottle, then cap.

This blend tasted more like Champagne, was about 14 percent alcohol and gave splitting headaches. I need a simple recipe, with no headaches.

Thanks,
Jon Krenytzky
The Woodlands, Texas

Dear Jon,

*You got it! Our official advice is that if you continue reading *zymurgy* and follow the guides we're sending, your headaches are over. Sugar and yeast may satisfy immediate gratification needs, but it's important to be able to get up the next morning and still respect your beer.*

Good luck!
Elizabeth Gold
Associate Editor

Correction

Darryl Richman's recipe for *Bock Aasswards doppelbock* on page 65, *zymurgy* Vol. 13 No. 4 (1990 Hop Special Issue) was incorrectly listed as making five gallons. The recipe given is actually for 15 gallons. If you've already made the recipe, we apologize, but we hope you enjoy your "quintuplebock" anyway!



**Mini money—it's not
this size in Peru, but
it might as well be.**

Making It in Peru

Dear *zymurgy*,

You are now a millionaire in Peru.

Please accept this gift (1 million *intis*) as an expression of my appreciation for publishing such a great magazine!

I want to brew my own beer and I

need your help. Sounds easy, but, I live in the Amazon. What style of beer is most suitable to brew in this environment? I have enclosed a water analysis for your benefit.

We drink a national beer that closely resembles a German export beer. The beer travels hundreds of miles by air or water.

By the way, that 1 million *intis* you have will buy just two 22-ounce bottles of beer.

G. Ryan Richards
Iquitos, Peru

Editor's Note:

Your water is very suitable for light lagers. By adding minerals, you

A Case of the Boils

Dear *zymurgy*,

During a recent homebrewing session I was explaining to my partner that I had not had a batch boil over for years. No sooner had the words left my mouth, of course, than our beer was flowing stoveside. We acted quickly enough to save the batch, (it was Charlie's raspberry imperial stout!) and chuckled about how fate had leered down at us even as we spoke about her behind her back.

I thought your readers might enjoy my ruminations about this relatively uneventful occurrence. I have been homebrewing for about four years, and even find time to work as a psychiatric rehabilitation specialist when I'm not dreaming up new recipes or quaffing old ones. Keep up the good work, people, and I look forward to seeing you all in New Hampshire in 1991!

With warmest regards,
Steve Schwartz
Brookline, Massachusetts

Boil Over Blues

Rules. They are everywhere. In the office, on the road, in the movie theater and even in your own home. Everybody has some rules to follow, even homebrewers. Aside from all the regular stuff, we have to check the hops, measure the specific gravity, pitch the yeast at the right time, and on and on. Of course, regular people break rules, and so do homebrewers. Everyone sneaks through a red light once in their life. In the same way, most homebrewers have used a shortcut, skipped a recommended procedure or gotten tired at 1 a.m. and thrown the yeast in before the wort was 80 degrees. It's our nature. After all, our motto is to relax and not worry.

There are some rules, however, that you really have

to stick to. For example, don't drive the wrong way down an expressway. It just isn't good for your health. Don't eat chocolate and pickles together. They just don't taste good. And don't, ever, under any circumstances, take your eyes off a boiling wort. Everyone who has ever homebrewed has probably done it, and we all remember what the results can be. The most dreaded of sights—the wort cascading over the lip of your kettle, and that most dreaded of sounds—your fabulous new recipe sizzling into steam as it flows onto your stovetop.

The novice homebrewer may be reading this and thinking "How long does it take? I'm sure I could just take my eyes off it for one second. . . ." Well, famous last words. One second is all it takes. One glance at the tube to see the replay of the Jose Canseco homer or the Montana touchdown pass. One trip to the fridge to retrieve that prized bottle of 1982 barley wine. One trip to the bathroom. One ring of the phone, one buzz of the doorbell, one daydream about the judge putting the first-prize ribbon on your beer. That could be it, folks. Boil over.

So, what if it does happen? What should we do? Pour out the batch? Chant the secret homebrewer chant long ago designed to overcome homebrewing disasters? Call the fire department? No, no and no. Remember we are homebrewers—relax. Remove the kettle from the burner as quickly as possible, but not with your bare hands! Try to clean the stove as quickly as possible. If the stuff dries, you will need a chisel to remove it. Take as much as you can of the hops that will be sticking to the sides of the pot and return to your brew. Lower the burner temperature and return the kettle to its proper resting place. Take a deep breath, ask a companion to watch the kettle for you and head for the fridge. Have that homebrew, don't worry and relax. Just think, that boil over may have made your best batch ever.

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can make it suitable for pale ales and dark lagers and ales. You are very fortunate! The information you've sent us shows that the sodium, calcium, magnesium, potassium, chloride, sulfate and carbonate are all 0 to 7 ppm. The bicarbonate is 28 ppm and the pH is 5.4. The amount of sodium bicarbonate is small and can be precipitated out by boiling the water. Thanks for the intis.

Cheers for Extract Brewer

Dear *zymurgy*,

Congratulations to Richard Schmit, 1990 Homebrewer of the Year and a fellow extract brewer. His award is a boost for extract brewers everywhere. Thorough sanitation and liquid yeast cultures can make outstanding brew. You don't have to mash to win.

Richard, great job!

Steve Jacoby
Stonesville, Pennsylvania

Fearing for Homebrew

Dear *zymurgy*,

I have been a member and subscriber for a short time so I don't know

if discussing commercial brews is acceptable or taboo. Because we are using them for comparison and for examples of styles, I believe a straightforward discussion is in order.

A couple of friends and I, probably like many AHA members, enjoy trying and rating different imported and better domestic beers. In the last year and a half or so we have noticed that a number of brands seem to have reformulated. Many have become sweeter and less flavorful and are lighter in color and mouth feel. We have a long list of brands that includes many different styles and countries. I was shocked when we discovered one stout and our favorite Scotch ale had little flavor left (these had been flavorful beers before). Are other AHA members making these observations as well? Are these reformulations to save money and to appeal to the Kool Aid and chocolate milk crowd? I am concerned that this trend will eventually make its way into homebrewing as future brewers and judges enter into this pastime.

Yours sincerely,

David Rithner
Wellsburg, West Virginia

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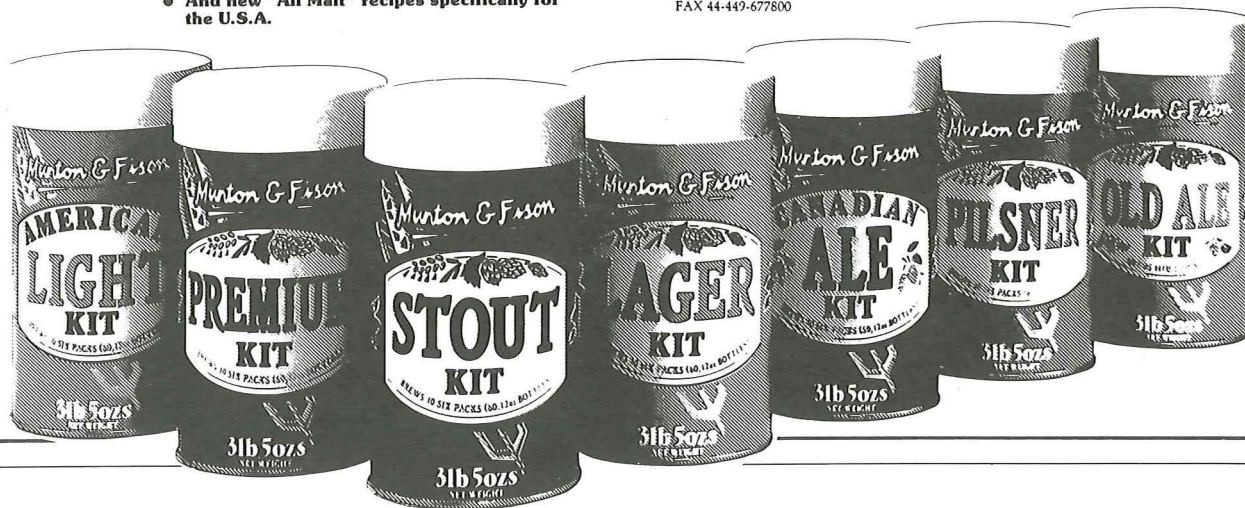
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ASSOCIATION NEWS

National Competition Continues to Change

The AHA National Competition continues to undergo transition in response to membership needs—to maintain quality and meet the dramatic growth in past years.

The AHA Board of Adviser Competition Committee, the membership and staff, together with comments from participants have helped to establish goals for the Nationals.

The short-range goals include:

- Anticipating 2,000 entries in the 1991 Competition.
- Maintaining the quality of the Competition while systems and judging expertise are developed, and familiarizing participants with competition changes.
- Testing and evaluating registration, data, communication and judging systems with an interim format for first-round judging in San Francisco, Boston and Boulder. This interim format limits and splits certain styles of beers judged on the West and East Coasts.
- Keeping the number of entries at the new sites to 500 to 600. This will be done by carefully analyzing

last year's entry data and selecting categories to be judged at new sites. This will be done so that new sites are not overwhelmed with unanticipated responsibility for judging an excessive number of beers using new systems.

- Developing, writing, implementing and publishing a *Manual for Judges and Judging Procedures* and *A Manual for Competition Entry Registration* to help assure maximum consistency in entry handling and entry evaluation.
- Evaluating and considering the results and comments from participants in the 1991 Competition to develop the long-range goals.
- Encouraging the support of the homebrewing community and beer industry through various sponsorships to help defray the costs of running the Competition and keep entry fees at a reasonable level.

The long-range goals include:

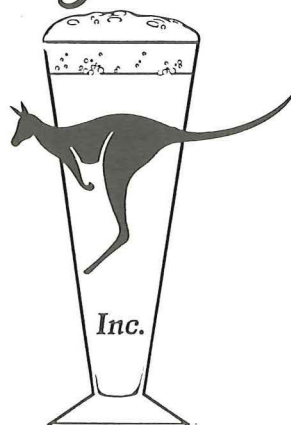
- Developing systems to maintain a quality Competition that is expected to exceed 3,500 entries within three years.

- Having multiple sites throughout the United States and perhaps Canada that will undertake judging all entries for all beer classes for homebrewers residing in a given region. The top-scoring beers in each class for each region would advance to the final round of judging.

- Developing registration and scoring systems, judging expertise and accurate and well-defined style descriptions. The goal is to maintain a one entry/one bottle requirement for first-round judging and a two-bottle submission to the final round.
- Developing accurate style definitions for the AHA Nationals that will enhance consistency in judging and help eliminate the possibility of "regional biases."

The entire National Homebrew Competition program, including styles, categories, rules and regulations have been revised and updated. The program was reviewed by the Board of Advisers Competition Committee and numerous professional brewers. Suggestions and comments were incorporated to improve the program.

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With an expected growth from 1,500 to 2,000 entries, one location no longer seemed appropriate. So for the first time in 12 years, first-round judging will be held in three separate locations. We would like to thank our three brewery hosts, Anchor Brewing Co., Boulder Beer Co. and Boston Beer Co., for generously donating space to receive, store and judge entries. (Please do not contact the breweries directly for judging information.)

Brook Ostrom is the site director in California and can be reached at 2631 G St., Sacramento, CA 95816, home phone, (916) 442-7626. National Competition Director Dave Welker is the site contact for Boulder and can be reached at the AHA, PO Box 287, Boulder, CO 80306, work phone, (303) 442-5748. For information in Boston, contact Bill Murphy, site judge director, at 16 Garrison Road., Brookline, MA 02146, home phone, (617) 566-4885. Be sure to check the conference brochure insert in *zymurgy* for complete information on how to be a first-round judge. This is an exciting opportunity to judge a National Competition and earn experience and BJCP points. Important dates to keep in mind: Entries will be received from April 1 through 17. Judging will take place in all three sites from April 21 through May 8. Second-round notifications will be mailed May 17.

1990 Prize Trip

Schedules have been set for both Darryl Richman, winner of the bock beer category, and Clay Biberdorf, winner of the barley wine category, to complete their 1990 brewery prize trips. Biberdorf will go to Young & Co. Brewery, London, England, the week of March 11, and Richman was set to travel to Aass Brewery, Drammen, Norway, the week of Feb. 18.

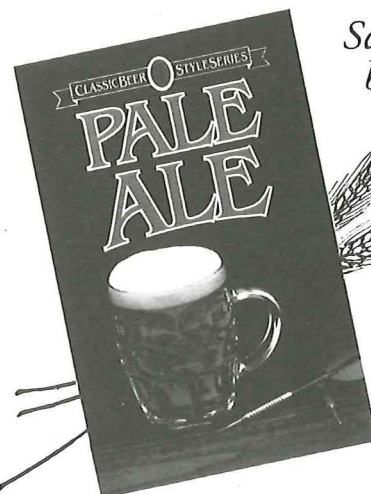
New Prize Trips for Competition Winners

As an added bonus for category winners in the upcoming AHA National Homebrew Competition, breweries worldwide are sponsoring prize trips. The winner of the barley wine category will again fly to London to assist brewing a batch of Old Nick Barley Wine Ale at the Young and Co. Ramrod Brewery, and again the bock category winner will fly to Drammen, Norway, to participate in brewing a batch of Aass Bock at the Aass Brewery.

The pale ale category winner will fly to Vermont to visit area breweries. The trip is sponsored by the following Vermont breweries: Vermont Pub and Brewery in Burlington, The Mountain Brewers in Bridgewater, the Otter

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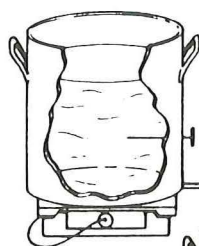
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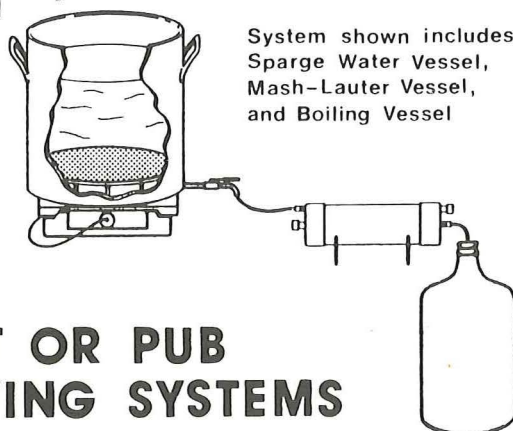
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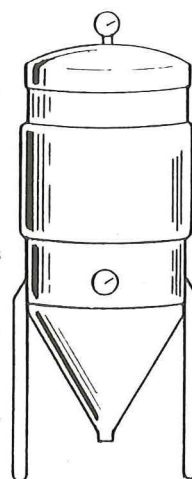
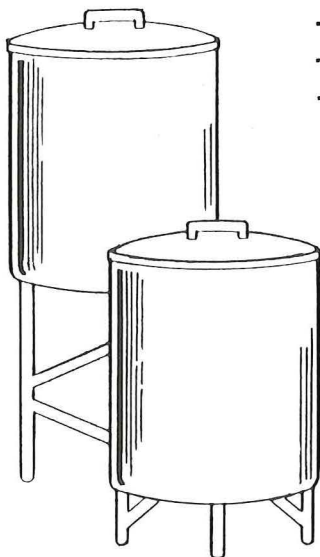


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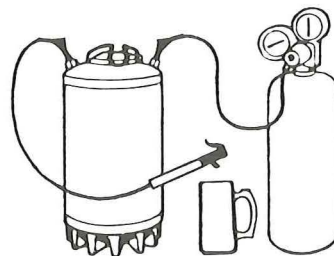
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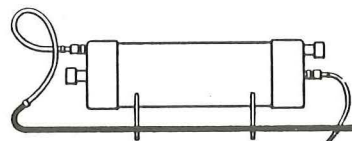
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Creek Brewing Co. in Middlebury and Dewey's Ale House in Brattleboro. The Vienna category winner will visit Chicago to taste and tour the beer scene there. The trip will be sponsored by the following Chicago breweries: ?Goose Island Brewery, Weinkeller Brewery, Pavichevich Brewing Co., and the Chiacago Brewing Co. The Miller Brewing Co. is sponsoring the American light lager winner, who will fly to Milwaukee to visit the city and tour the Miller Brewing Co. The winner of the stout category will fly to Washington to taste beer and tour breweries. The prize is sponsored by the Pike Place Brewery, Maritime Pacific Brewing Co., Duwamps Cafe/Seattle Brewing Co. and the Roslyn Brewing Co.

Finally, the Homebrewer of the Year will win a trip to the 1991 Great American Beer Festival in Denver, Colo., Oct. 4 and 5.

On The Road

Karen Barela traveled to Manchester, N.H., and Boston, Mass., in early December to set up the 1991 Homebrew Conference. She also went to Milwaukee, Wis., in late January to scout possible locations for the 1992 Homebrew Conference. Coming up April 6 to 8, she and Linda Starck will be attending the Home Wine and Beer Trade Association's annual convention in San Antonio, Texas.

April also will be a busy month for Charlie Papazian. From April 11 to 13, he will be in Quebec to attend the Canadian Independent Brewers Association meeting and will spend time with area homebrewers. Flying down to San Antonio April 14 to 18, Charlie will represent microbrewers and AHA interests at the American Society for Brewing Chemists national convention. Next he will be off to St. Kitts to the Master Brewers Association of the Americas' Caribbean convention, again representing microbrewers and the AHA. May 12 to 16, Charlie will attend the European Brewing Congress biannual convention in Lisbon, Portugal. Back once again in the United States, Charlie will be the guest of the Bluff City Brewers of Memphis, Tenn., on May 26 to participate in homebrewing events and fund raising for a local charity.

Homebrewing PR

The press has been having a field day with homebrewing in recent months and we've been experiencing a lot of publicity as a result. The *Associated Press* carried a story on the New York Outlaws of Homebrew annual club party. On Dec. 31, NBC's "The Today Show" aired a two-minute piece on families who brew together. The story was later aired by several local news stations nationally. All of the attention is a big plus for the amateur brewer and for the beer industry.

Changes of AHA Staff

David Edgar, former editor of the Homebrew Clubs and Winners Circle features in *zymurgy*, will be working exclusively for the Institute for Brewing Studies. Edgar has turned over his AHA duties to Dan Fink, who has taken on the responsibility of assistant to Karen Barela, AHA administrator, and Elizabeth Gold, associate editor. Gold also is shouldering new responsibilities as Brewers Publications director. The latest books to be published are *Lambic; Beer and Brewing, Vol. 10; Continental Pilsener*; and *Brewery Operations, Vol. 7*. Buzz Burrell has taken over the helm of the merchandise department as sales manager. New in the shipping department are Tim Armstrong and T. E. Bennett, who split the job of shipping clerk. Eric Gold is now the customer service representative who also pitches in when the phones ring out of control. Tim Sposato is the most recent addition to our staff and we welcome him as our new graphics/production director.

May 4 Marks National Homebrew Day

Plans are under way for a nationwide celebration of the art and science of homebrewing. One national promotion will include a day of first-round judging of the AHA's National Homebrew Competition, which will be held in three separate locations, Boston, Boulder and San Francisco. Free beds for brewers and barbecue festivities will be included in this program.

BREW NEWS

DAN FINK

Gruel With A Kick

A 5,400-year-old brewery has been unearthed on the banks of the Nile near Cairo, Egypt, according to an article by William Booth of the *Washington Post Service*. The brewery was active before the rise of the pharaohs and the building of the pyramids and is thought to be the oldest brewery ever found.

The beer was brewed in pottery vats that were heated on fires of dung and wood. Analysis of black residue from the vats revealed that the beer was made from wheat malt and a syrupy sugar adjunct that was probably date juice.

"I'm describing the beer as gruel with kick," said Jeremy Geller, the archaeologist who made the find. "The Egyptians certainly weren't prudes. We're not talking about Nero and vulgar excess, but neither are we talking about a real sober people. There was clearly a place in ancient Egypt for dance, joy and a little indulgence in beer and, later, wine."

CAMRA Complains to Czech President

In an open letter to Czechoslovakian President Vaclav Havel, Britain's Campaign for Real Ale urged Havel to protect his country's brewing heritage by forbidding Anheuser-Busch from purchasing the Budweiser Budvar brewery in České Budějovice. CAMRA is concerned that if Busch buys out Budvar, the famous Czech Pilsener may start to taste more like American Budweiser, and that Busch will prevent the Czech product from being sold in the European market.

"The Americans have their own way of brewing. Once the Czech

brewery is sold we would have no guarantee that the fine standards of the brewery would be maintained, and the beer might well become more like its American counterpart. That would be a tragedy," the letter says.

"You have a brewing heritage that is the envy of the world," the letter concludes. "Please, President Havel, do not let that heritage be squandered."

Controversy About Extracts

The Winter 1990 issue of *zymurgy* carried an item in *Brew News* that addressed sugar additives in malt extract. The brand names of the extracts involved in the study were not released by the researcher. We are currently in contact with the scientist for more information and will report our findings in a future issue of *zymurgy*.

Swing-top Bottles Banned

It is illegal to sell, manufacture or distribute swing-top bottles with ceramic lids in California as of Jan. 1, 1991. The measure was passed as part of the state's Clean Glass Recycling Act, and applies to all food and beverage containers, including empty ones to be used by homebrewers.

The only two exemptions are for special edition decorative containers (such as Christmas decanters) and enameled bottle labels (such as Corona beer). Violators can be fined up to \$1,000 a day.

According to a state official, if a single ceramic bottle top is found, an entire 35-ton truckload of glass can be rejected for recycling. If the ceramic makes it to the recycling furnace, it can ruin the lining. The

ban *does not* apply to plastic or glass swing tops.

Alcohol Awareness Is Working

Significant improvements are being seen in the effort to stop drunk driving, according to statistics released by Anheuser-Busch. Statistics from the National Highway Traffic Safety Administration show that the number of persons killed in drunk-driving accidents is down 12 percent from 1982, and the number of traffic deaths involving drunk drivers is down 16 percent since that time.

Busch attributes much of the success to alcohol awareness programs that it and other companies sponsor. An Anheuser-Busch spokesman said the company spends as much or more money yearly on its "Know when to say when" program than on most of its single beer brands, such as Michelob.

Priorities!

Number of votes received by the Beer Drinkers Union in the East German elections last March: 2,534. Number of votes received by the Unification Now party: 2,396 (From *Harper's Index*, July 1990).

It's the Rat Beer Now

Copper-deficient rats that drank Budweiser lived six times as long as those that drank water, according to a U.S. Department of Agriculture study. Researchers were trying to determine if beer could help prevent copper deficiency, a possible factor in heart disease and cholesterol buildup.

Bud was chosen simply because it is America's best-selling beer—the scientists say other beers work too.

CALENDAR OF EVENTS

1991

March 1-3	Bluebonnet Brew Off, AHA Sanctioned Competition , Fort Worth, Texas. Contact Rob Stenson at (817) 763-5123.	April 20-21	Fifth Annual Bidal Society Competition, HWBTA Sanctioned Competition, Kenosha, Wis. Contact Brian North at (414) 761-1018.
March 2	March Mashfest, AHA Sanctioned Competition , Fort Collins, Colo. Contact Glen Colon-Bonet at (303) 224-9469.	April 21-27	Upstate New York Homebrewers Association 13th Annual Homebrew Competition and 2nd Annual Empire State Open, AHA Sanctioned Competition , Rochester, N.Y. Contact Gary Thomas at (716) 637-9441.
March 8	BJCP Exam, Reno, Nev. Contact Rob Bates at (702) 329-2537.	April 27	Great Canadian Homebrew Competition, AHA Sanctioned Competition , Toronto, Ontario, Canada. Contact Paul Dickey at (416) 239-5401.
March 23	The First Annual Hudson Valley Homebrew Competition, AHA Sanctioned Competition , Kingston, N.Y. Contact Nat Collins at (914) 679-5750.	April 27-28	U.S. Open Homebrew Competition, AHA Sanctioned Competition , Carolina Brew Masters, Charlotte, N.C. Contact Douglas Mackay at (704) 376-4916.
March 23	BJCP Exam, Woodland Hills, Calif. Contact Martin Velas at (213) 329-8881.	May 4	National Homebrew Day.
March 29	Bock is Best, AHA Club-only Sanctioned Competition , Entry Deadline is Mar. 29. Call the AHA at (303) 447-0816.	May 26	Midtown in May Homebrew Extravaganza, AHA Sanctioned Competition , Memphis, Tenn. Contact Chuck Skypeck at (800) 826-BREW. Entry deadline is May 25.
March 30	BJCP Exam, Columbus, Ohio. Contact Mindy Goeres at (513) 236-0258.	June 19-22	AHA 1991 National Homebrew Conference, Manchester, N.H. Call the AHA at (303) 447-0816.
April 1-17	AHA National Competition entries received.	Sept. 4-7	National Microbrewers/Pubbrewers Conference and Trade Show, Buffalo, N.Y. Call the Institute for Brewing Studies at (303) 447-0816.
April 6	Big and Huge Hearted, AHA Sanctioned Competition , Madison, Wis. Contact Jan Blochwitz at (608) 256-5364 or Michael Howe at (608) 255-5422.	Sept. 15-18	Master Brewers Association of the Americas 104th annual convention, Calgary, Alberta. Contact Dan Sommers at (608) 231-3446.
April 6	Gemstate Homebrew Competition, AHA Sanctioned Competition , Boise, Idaho. Contact Loren Carter at (208) 385-3473.	Oct. 4-5	Great American Beer Festival, Denver, Colo. Call AOB at (303) 447-0816.
April 6-8	Home Wine and Beer Trade Association annual convention, San Antonio, Texas.		
April 14-18	American Society for Brewing Chemists 57th annual meeting, San Antonio, Texas. Call the ASBC at (612) 454-7250.		

To list events, send information to *zymurgy* Calendar of Events, PO Box 287, Boulder CO 80306-0287. Competition organizers wishing to apply for AHA sanctioning must do so at least two months before the event. Contact Karen Barela at (303) 447-0816.

However, it's still a mystery how the rats were helped. The alcohol itself was not responsible, because rats that received pure alcohol in the same amounts as in the beer did not live any longer. The scientists say when the cause is determined, it might explain why blood cholesterol levels are low in the summer, when beer drinking is at its highest.

Two New Meaderies

Both Idaho and Tennessee boast new meaderies. The Life Force Winery in Moscow, Idaho, began operations at the end of 1989, and is making 250 gallons a year. They make a light mead from star thistle honey and a darker variety from wildflower honey, according to *Mead Letters*, published by the American Mead Association.

The Black Fox Meadery in

Murfreesboro, Tenn., is now producing several varieties, all based on light clover honey. Proprietor Robert Lasseter said, "Of course, I have to explain to almost everyone what mead is, but I think our St. Bartholomew's Mead has a tremendous future."

Big Six's Burton Brews Better Best Bitter

Burton Ale won the honor of grand champion in this year's Great British Beer Festival, much to the chagrin of some die-hard CAMRA members, according to an *Associated Press* wire story. Allied Breweries, maker of Burton, is one of the much-criticized Big Six breweries in Britain, all of which have been the focus of CAMRA's ire against big brewers buying out smaller competitors and eliminating their beers.

"On the whole, we don't think that the national brewers do a particularly good job," said a CAMRA spokesman. "That doesn't mean that we don't give praise where it's due, and Burton Ale is actually an example of a national brewer doing something that we think is right."

Poisonous Homebrew in Saudi Arabia?

Eight American GIs in Saudi Arabia were hospitalized from drinking poisonous homebrew containing methyl alcohol, according to an *Associated Press* wire story. The article went on to say that methanol poisoning "is a problem associated with faulty home-brewed alcoholic beverages," and was a serious problem during Prohibition.

After talking with the AHA, the

AP agreed to clarify the difference between homebrew and distillate in any follow-up stories on the subject. The GIs were *not* poisoned by homebrew, but by distilled alcohol.

Sake Brewer Busted in Japan

An 80-year-old writer was convicted for making sake for personal use in Japan last December, according to a Japanese news report. Toshihiko Maeda was fined the equivalent of \$2,200 for brewing doburoku, an unrefined variety of sake, which violated Japan's liquor tax law.

Maeda insists that government restrictions have made brewing a declining art in Japan, and he had organized a homebrewing and tasting association. He also declared that he would continue to make sake regardless of government harassment, and that he would refuse to pay the fine.

Have You Seen Brew News Happening?

If you see any news items you think are appropriate for Brew News, please help spread the word by sending clippings to *zymurgy*. We depend on readers for much of our material.

AHA Sanctioned Competitions

Seventh Annual Dixie Cup

The 1990 Dixie Cup competition in Houston, Texas, was a smashing success this year with 422 entries from all over the country. Tim Case of the Foam Rangers took best of show with an American Pale Ale (a category patterned after "cascade" ales such as Sierra Nevada).

California State Fair

Kelly Robinson's Scotch ale took best of show in the 1990 California State Fair Homebrew Competition in Sacramento, Calif. The contest drew 254 entries.

Great American Beer Festival IX Hosts Record Number of Beers

A record 480 beers were presented at the 1990 Great American Beer Festival IX, a two-day extravaganza of beer and brewing on Nov. 2 and 3 in Denver, Colo. A total of 151 breweries were represented, up from 106 breweries and 298 beers last year.

Twenty professional judges awarded medals in 31 style categories. The judges hailed from breweries of all sizes, from commercial giants to small-town brewpubs. With the increased prestige of the Professional Panel Blind Tasting overshadowing the Consumer Preference Poll, in addition to controversy in past years over excessive merchandising by brewers, the consumer poll was discontinued this year.

The Festival moved to a new hall, the Denver Merchandise Mart, which provided twice the space of previous Festivals. Since 1977 the beers were on draft, an innovative tapping system was developed using horse troughs to hold ice, kegs and hundreds of feet of wooden framework lined with beer faucets. The new system was a complete success, judging from compliments of brewers and the lack of tapping problems.

Attendance at the Festival was 6,200, the same as last year, probably because the year's first major snowstorm occurred on Friday. The number of volunteers pouring beer

and helping set up increased from 125 to nearly 300 this year.

Attendees received a tasting glass and program that described all the beers. The serving size was restricted to one ounce to encourage drinkers to sample different beers. And different they were! Pumpkin beers, smoked porter, lemon dry beer, raspberry wheat beer and blueberry ale were among the great variety of unique brews present.

Tom Dalldorf, editor of the *California Celebrator Newspaper*, called this year's Festival, "A cross between a brewschool reunion and New Year's Eve with the Grateful Dead." And quite a party it was—both for the brewers and ticket-holders. Watching 6,200 people drink and have a great time without becoming intoxicated is truly a heartening sight in these days of increasing neo-Prohibitionism.

Next year's Festival may have to move to an even bigger hall, but preliminary plans are to stay at the Merchandise Mart. With current trends moving toward better quality and variety in beer, along with new microbreweries and brewpubs sprouting up all over the country, next year's Great American Beer Festival can only get bigger and better.

The 1991 Great American Beer Festival X is scheduled for Oct. 4 and 5.

—Dan Fink

Riverside Farmer's Fair

The first annual Farmer's Fair competition in Riverside, Calif., got off to a great start with 75 entries. Clark Nelson of Tempe, Ariz., took best of show with a sweet stout. The competition was sponsored by the Temecula Valley Brewing Co.

All About Ales

Bruce Taylor took best of show with a brown ale in the All About Ales

competition in Toronto, sponsored by the Canadian Amateur Brewers Association. The contest drew 62 entries. Eight merchandise prizes were awarded, including a beer filter donated by Marcon Filters for best of show.

1990 HOPS BOPS

The 1990 BOPS (Best of Philadelphia and Suburbs) sponsored by HOPS (Homebrewers of Philadelphia and Suburbs) drew 58 entries this

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year. George Hummel of Philadelphia took best of show with a rauch amber lager.

Los Angeles County Fair

David Sherfey of the Maltose Falcons won best of show in the Los Angeles County Fair homebrew competition with a Scots ale. The competition drew 109 entries.

Loose at the Goose II

Jeff Coursey took best of show with a pale lager at the 1990 Loose at the Goose competition at the Goose Island Brewery in Chicago. There were 76 entries.

1990 Josephine County Fair

Michael Maas took best of show in the 1990 Josephine County Fair competition in Grant's Pass, Ore., which drew 12 entries. The winning beer was a light weizen.

MidSouth Fair

The MidSouth Fair Homemade Beer Competition in Memphis, Tenn., drew 133 entries from six states this year. Thirty-two judges participated, and Phil Rahn's bock took best of show.

Santa Cruz County Fair

The 1990 Santa Cruz County Fair in Watsonville, Calif., drew 65 entries this year. Clark Lounsbury's European Pilsener took best of lagers, and Harry Graham's barley wine took best of ales.

Happy Holiday Competition

George Fix's Munich helles won best of show in the 1990 Happy Holiday Homebrew Competition in St. Louis, Mo., run by the St. Louis Brews. The event drew 76 entries.

Micro and Pubbreweries

Openings

United States

CALIFORNIA: La Jolla Brewing Co., La Jolla • Okie Girl Brewery (Formerly Grapevine Brewery), Lebec • Mt. Konocti Brewing Co., Lakeport • The Red Kettle Restaurant, Encinitas

COLORADO: Antlers Double Tree Hotel, Colorado Springs

INDIANA: Broad Ripple Brewing Co., Indianapolis

IOWA: Fitzpatrick's Brewing Co., Iowa City

MAINE: Bar Harbor Brewing Co., Bar Harbor

MICHIGAN: Detroit Brewing Co., Detroit

NEW MEXICO: Manzano Mountain Brewing Co., Tijeras

OREGON: Willamette Brewing Co., Salem

VERMONT: Otter Creek Brewing Co., Middlebury

WISCONSIN: Rowland's Calumet Brewery-Brewpub, Calumet

Canada

ALBERTA: Brewsters Brewpub and Brasserie, Calgary

ONTARIO: Diamond Hill Brew Pub, Richmond Hill • CEEPS Barney's Ltd., London

QUEBEC: L'Inox, Quebec City

SASKATCHEWAN: Bushwakker Brewing Co., Regina

Closings

United States

ARIZONA: Pendleton's Brewpub, Paradise Valley

CALIFORNIA: Paso Robles Brewing Co., Paso Robles

ILLINOIS: Sieben Brewing Co./River North Brewery, Chicago

Canada

NEWBRUNSWICK: Fat Tuesday's, Moncton (still open, no longer brewing.)

ONTARIO: Burlington Brewing Co., Burlington • Ottawa Valley Brewing Co., Nepean • Wheatley Brewery, Wheatley

JACKSON ON BEER

MICHAEL JACKSON

Slow Trains, Tea and Viennese Beer

The night train from Moscow, thanks to Mr. Gorbachev's strictures, had no beer. The tea was good, though. At the end of each carriage, there was the lady (mine was young and radiantly pretty in her powder-blue uniform, white shirt, black leather tie, fitted skirt and red boots) in the tiny room with the samovar. That splendid device was fired by coals that glowed brightly through the night.

As I walked back from the rudimentary dining car where the television had been showing Tom and Jerry cartoons, crossing endlessly from one carriage to the next through unlit concertinas and over footpaths narrow enough to expose too much of the track beneath, the flash of each new samovar fire offered a reassuring warmth.

I never learned my young lady's name, but we established a rapport. She had an instinct for the moment when the glass cup, in the elegant silver holder, was empty. The tea ceremony, and all that attended it, was one touch of luxury.

It was a 15-hour journey, with more tea to warm the morning as we reached the end of the line, at Tallinn, a city of half a million people and the capital of Estonia. A snowplow was sweeping the platform of the station.

From the station, the town



looked magnificent. I never found a better view. It could clearly be seen as the walled, Hanseatic city—ringed with cannon towers, each with a conical roof of terra cotta tiles—on a rocky hill that overlooks a natural harbor.

From my gloomy, modern hotel, I could see the green verdigris of the 13th-century Lutheran Cathedral and the Baptist Church. When I took a trip through town, I saw the colorful onion domes of the Russian Orthodox Church and the pastel-painted, 18th-century buildings that had been the homes of wealthy merchants.

My taxi took me down a cobbled street lined with government buildings, where I was to present myself

to the Minister of Agriculture. The minister had a baize-topped desk of elaborately carved oak, but we sat at a glass-topped table and drank coffee and Estonian mineral water. He had a curly quiff (forelock) and gray sideburns curving into the cheekbones of his wide face.

"I remember my father drinking Le Coq beer," he told me with puckish enthusiasm.

"What was it like?" I asked. "It came in big bottles—an unusual shape," was all he could remember. He told me that Estonia had three principal state-owned breweries, one smaller brewery on an island, plus the odd, even smaller one attached to a collective farm.

We talked a little about the potential for exports, and about the political situation next door in Lithuania. "It is no secret that our future may be similar," he observed carefully, once the formalities had been completed.

First I was to pay a courtesy visit to the Saku brewery, just 10 miles outside Tallinn. The brewery, among pine trees by the Saku River, had been established by a German Lord of the Manor in 1820, and expanded into its present form in 1876. The brew kettle, made by the Gambrinus Works of Dresden, dated from 1909.

"It is still going strong, like Johnnie Walker," said my guide,



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who was justifiably proud of his idiomatic English and his 77 years. He had been educated in Berlin, and thought Germany should get back the eastern lands from Poland.

Like most of the people I met, he was Estonian, not Russian. He was an Estonian patriot, a lawyer by profession with a dapper appearance, but his business card assigned him to marketing. I asked him if I might try the beers.

A smiling lady in a white coat, whose card described her with the sexist term brewmaster, brought pitchers of a sweetish beer in broadly the Vienna style and a very malty Munich-type dark of 1.068 gravity, both fresh from the lagering tank.

She told me that they brewed a 1.080 gravity porter at Christmas. I asked if I could sample that. "There is one left," she said, with a regretful shake of the head. "Not even in the lab?" I essayed. "I'm afraid not."

She did not know when the porter had last been made with a top-fermenting yeast. It had always been bottom fermenting during her time, and she had been there for 25 years.

On the way back into Tallinn, we passed a long march of demonstrators. They were ethnic Russian factory workers waving red flags. One had a poster saying: "Only

socialism can protect Russians." They were demonstrating for equal rights with Estonians.

That evening was spent with a group from the Ministry of Agriculture over a dinner of caviar and trout, washed down with vodka, rounded off with Estonian liqueurs and sweated out in a sauna.

Next day, finally, I set out for Tartu by car with a driver, a guide and a translator. It was a three-hour drive with a break at a truck stop for coffee and cake. It takes about the same time by bus, but the train is slower. The journey is a little over 100 miles in an easterly direction.

We drove out past a rather run-down industrial area and the modern airport, and soon there was nothing but fields covered with snow that was blowing like a white version of a desert storm.

There were clumps of rowan trees and yellow maples, and sometimes hedges of fir trees planted as snowbreaks.

Beyond them, the fields rolled away into a snowy infinity, speckled with silver birches, meeting a gray sky that would occasionally light with bright sun. In one

such interlude, I saw a man driving a pony-drawn sledge across the fields.

Occasionally, there was a wooden bungalow painted in mustard or a rusty color and usually roofed with corrugated iron. Sometimes there would be a wooden platform, with steps.

I was told that farmers left milk in churns on the platforms, to be picked up by trucks. I never saw any churns, though trucks, buses and cars did pass us.

In the middle of nowhere there would be a bus stop and occasionally a sturdy shelter. We passed the odd person walking, one jogging and a lone cyclist. There was a hamlet now and then, but scarcely a village.

Suddenly, looming through the snowstorm, were the outskirts of Tartu, a town of 100,000 people. It is a university town, and the first buildings of any size that we saw were the dormitories of the Academy of Agricultural Sciences.

Almost immediately we were turning down an avenue of trees, to be confronted by the brewery that I had seen a hundred times in the pages of my own book. Until this moment, I had viewed it only in a soft, sepia photograph from perhaps 1912, or at the latest the 1920s.

Now, it was before me in tangible stone. It looked no different, right down to the snow on the ground.



Part Two of a series on the quest for Russian stout, continued from zymurgy, Winter 1990, Vol. 13, No. 5. To be concluded in zymurgy Summer 1991, Vol. 14, No. 2. Reprinted with permission from What's Brewing, newspaper of the Campaign for Real Ale.



Homebrewers, a Toast Please...



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The American Homebrewers Association wishes to thank these three breweries for their generous contribution of time and facilities for hosting the First Round of the AHA 1991 National Homebrew Competition.

HOMEBREW COOKING WITH THE BREWGAL GOURMET

CANDY SHERMERHORN

Ever notice that while some foods cry out to be enjoyed with a cold beer, very few are actually prepared using beer? With the variety of homebrew available, it is only natural to use it in our cooking. Combining beer with cuisine had never occurred to me until I lived in Germany. There my passion for good food and spirits flourished as I did my best to eat my way through Deutschland and her neighbors. As my husband so delicately puts it, not since the invasion of Hannibal and his elephants have the restaurants of Europe been in such peril.

Upon returning to the States, I spent the next 10 years researching, experimenting and cooking, especially with beer. Along the way I opened a European-style bakery. The exposure eventually launched me into a teaching and writing career about my favorite pastime. My specialty is taking



The brewgal gourmet wields her favorite cooking tools.

the "mystique" out of cooking and illustrating just how simple it is to prepare marvelous and unique dishes. Animated personality and original recipes that always use one spirit or another have marked me the "Spirited Gourmet."

It wasn't until a few years ago that I started using homebrewed beer as an ingredient. You can imagine the horror on my husband's face when he walked in and caught me red-handed, pouring one of his prized homebrews into a saucepan. After he came to and tasted the results, he decided it was worth the sacrifice, and I now use it freely (so long as it is *not* the last cold one in the house). He has enjoyed the experience so much that we now brew batches just for cooking.

I would like to share three beer-based recipes: a unique and zesty steak sauce, fajitas (Southwest-style meat) and a hot-sweet mustard. Inspiration (and the beer on hand) should be your guide to selecting the brew to use. To illustrate, the steak sauce is superb made with a Pilsener (refreshing and versatile), yet equally praiseworthy made with an Irish stout (rich and robust). My recipes are not set in cement and I encourage you to adapt each to suit your own tastes.

Still not convinced about donating one of your beers to the kitchen cause? Well, to quote a *very* popular author, "relax, have a homebrew." Remember, to truly enjoy cooking, as in homebrewing, one should approach the kitchen with a sense of adventure, anticipation and creativity, not to mention a bit of humor, especially when things just don't "pan" out.

Home "Brewed" Steak Sauce

This sauce is pungent and tart but not overly sweet, lending itself

nicely to barbecues and marinades.

- 1 1/2 cups beer (your choice)
- 1/3 cup dry sherry
- 1/4 cup honey
- 1/3 cup mild vinegar (rice, red wine or cider work great)
- 1/3 cup dark soy sauce (cooking soy sauce, very strongly flavored)
- 1/2 teaspoon liquid smoke (hickory or mesquite)
- 1/2 medium yellow or white onion, coarsely chopped
- 4 large cloves of garlic, peeled
- 1/2 cup raisins
- 1/4 teaspoon of red chili flakes (more or less to taste)
- 1 tablespoon fresh orange zest
- 1/2 teaspoon each of fresh ground black pepper and coriander seed

Combine all ingredients in a blender and blend until smooth. Pour the puree into a medium saucepan and bring to a low simmer. Simmer for 20 minutes, remove from the heat and allow to cool.

Fajitas

Serves 4 to 6. Marinated strips of meat served with tortillas and salsa, presented sizzling and sputtering at the table (oh, how they go with beer!) Traditionally made from skirt steak, but top sirloin makes a marvelous substitute and does not require tenderizing. The secret of success to memorable fajitas is not just the marinade, but actually cooking the meat twice.

Fajitas Marinade

- 2/3 cup of Home "Brewed" Steak Sauce
- 1 lime, juiced
- 3 to 4 serrano chiles, finely chopped, or 1 to 2 chopped jalapenos

- 1/2 cup quality olive oil (cold-pressed extra virgin oil)
- 1 teaspoon freshly ground cumin, coriander seed and black pepper

Fajitas

- 2 1/2 to 3 pounds of top sirloin (2/3 to 3/4 inch thick)
- 4 bell peppers (for color, try one red, one yellow, two green)
- 3 large onions, sliced thin
- 6 roasted and peeled green Anaheim chiles (or canned)
- 1/3 cup olive or peanut oil (more may be needed)
- 2 tablespoons melted butter mixed with 1 tablespoon oil

First and foremost, chill down the brew to go with this feast. Combine the marinade ingredients and marinate the steak 4 to 6 hours, turning once. While marinating, seed and slice the peppers to 1/3-inch thickness and the onions to 1/2-inch thickness (separate into rings), then roast, peel and pull the chiles into strips (place in

separate bowls). Have the remaining ingredients close at hand.

Drain the meat, pat it dry and using very high heat, grill, broil or pan-fry for approximately 3 to 4 minutes per side, just enough to sear and brown the outside, leaving the inside rare. After searing, cover the meat with foil. The meat *must* rest 20 to 30 minutes, allowing the juices to "settle." While the meat is resting, heat a large heavy skillet (cast iron works best) on medium-high heat. When very hot, add the oil, allowing it to heat briefly and toss in half the onion rings (small batches are best), turning and tossing them (tongs work great) until they are browned on the edges but retain their crispness; set aside in a large bowl.

Repeat with the peppers, cooking in two batches and add to the onions; add the chile strips and toss. Slice the meat across the grain in long, thin strips (1/4 to 1/3 inch thick). Reheat the skillet and add 3 tablespoons of peanut oil. When very hot, add the meat, stir-frying just long enough to get the meat hot. Add the sauteed vegetable mixture to the meat and toss quickly to heat through. Place on a large hot platter and pour the butter-oil mixture over the top (if the platter is hot enough, it will sizzle and sputter). Serve immediately with lime wedges, lots of hot flour or corn tortillas and your favorite salsa.

Candy's Hot-Sweet Beer Mustard

There is no substitute for this addictive mustard. Even die-hard mustard-haters have become converts to this stuff, confessing to using it on meats, in salad dressings, with curried rice, and dipping their French fries in it!

- 1/4 cup dry mustard powder
- 1/3 cup malty, rich beer (stout or dark amber)
- 2 tablespoons rice vinegar
- scant
- 1/4 cup sugar
- 1 tablespoon prepared horseradish
- 2 large egg yolks, beaten

Whisk together the first five ingredients in a glass or stainless-steel bowl. Cover and let set 30 minutes. Whisk in the yolks and place the bowl over a saucepan of simmering water. Cook, whisking constantly until thickened. Remove from the heat and place in a small crock or jar, keeping refrigerated. This recipe doubles and quadruples wonderfully, and it makes a great gift!

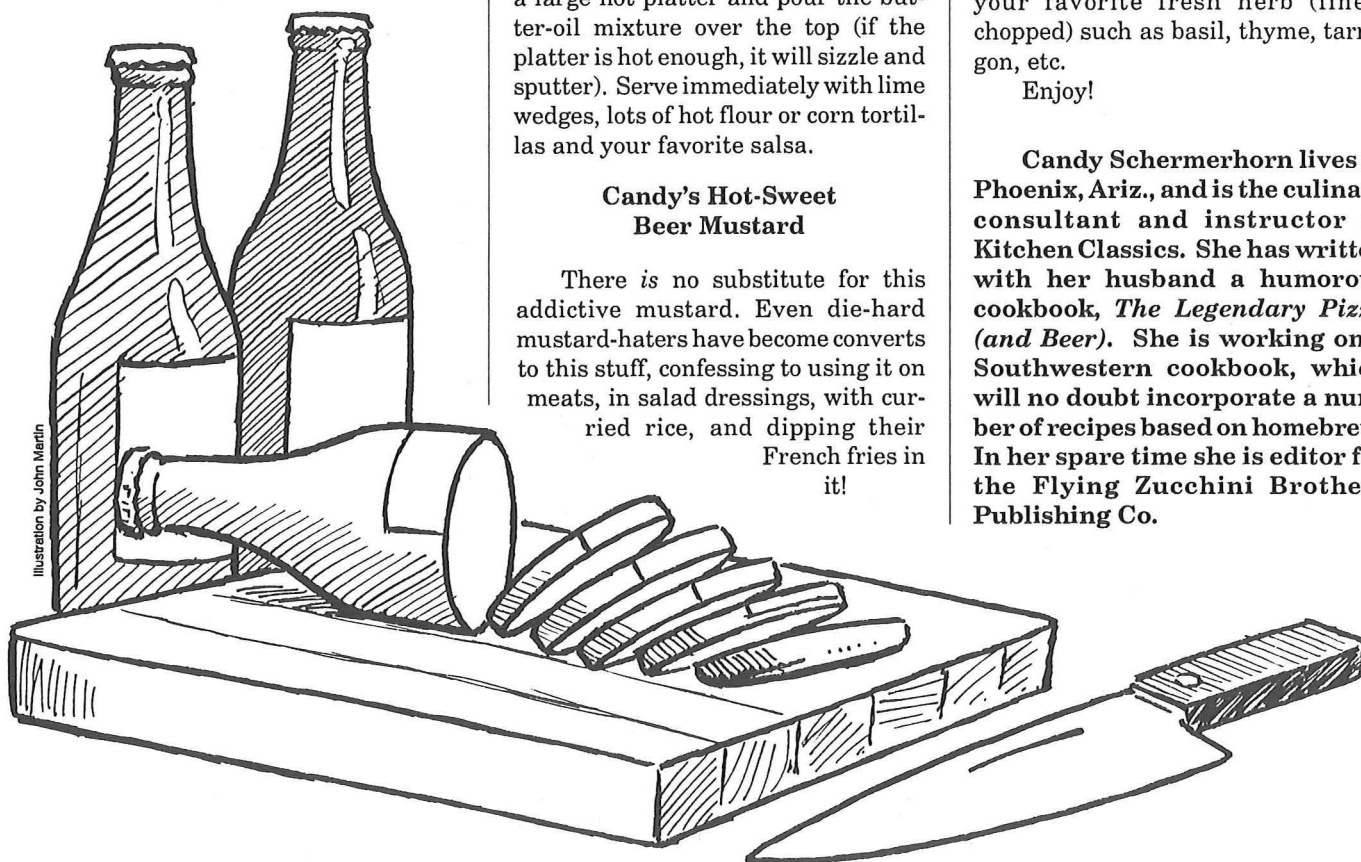
Variations

Curry Mustard—In place of 1 tablespoon of horseradish, use 1/2 tablespoon horseradish plus 2 teaspoons of curry powder (or to taste). **Honey Mustard**—Use 1/2 cup honey instead of sugar and 3 egg yolks instead of 2. **Herbed Mustard**—Add 1 tablespoon of your favorite fresh herb (finely chopped) such as basil, thyme, tarragon, etc.

Enjoy!



Candy Schermerhorn lives in Phoenix, Ariz., and is the culinary consultant and instructor at Kitchen Classics. She has written with her husband a humorous cookbook, *The Legendary Pizza (and Beer)*. She is working on a Southwestern cookbook, which will no doubt incorporate a number of recipes based on homebrew! In her spare time she is editor for the Flying Zucchini Brothers Publishing Co.



The Beers and Breweries of Philadelphia



e've all heard about the glorious "good old days," but did you ever stop to think what things were really like hundreds of years ago? If we ever got a chance to live just one day in the past, we might find, in the words of Carly Simon, that "These are the good old days." Some homebrewers may still be interested in recreating colonial beer recipes. The results will demonstrate that our taste in beer has changed dramatically in the last 300 years, and even with attention to cleanliness, these beers will not be for the timid palate.

Colonial Beer

Of course, colonists were just learning how to get along in the New World, and like pioneers, they had to make do with what was available. Beer was made from pumpkins, persimmons, cornstalks and Jerusalem artichokes. Hop substitutes and other flavorings included: wild carrot seed, coriander seed, brown sugar, horehound and wormwood. Purl was a type of beer made from Roman wormwood, roots, horseradish, dried orange peel, juniper berries and crushed seeds of Seville oranges. Porter beer could be made from the root of gentian, or strictly malt and hops when available.

"Our drink has been beer and punch, made of Rum and water. Our Beer was mostly made of Molasses, which well boyld, until it makes a very tolerable drink, but note they make Mault, and Mault Drink begins to be common, especially in the Ordinaries and the Houses of the more substantial People. In our great Town there is an able Man (William Frampton), that has set up a large Brew House, in order to furnish the People with good Drink, both there and up and down the River." (William Penn: "A Further Account of the Province of Pennsylvania And Its Improvements," 1680s)



RICH WAGNER

Recipes For Pre-Industrial Beer

The following recipes may give some idea about what "pre-industrial" beer might have been like.

Molasses Beer

"... the liquor is to be prepared, as before for Beer directed: and to every hundred of Molasses Thirty-six or Forty Gallons of Liquor is to be added (Mary Eales: one cask, 5 pounds molasses, .5 pints of yeast), and they must be stirred well together till the whole be dissolved, and then up with it into the Copper, adding therto three pounds of Lignum Vitae (also known as guaiacum, a tropical tree), one of dry balm, and four ounces of Nutmegs, Cloves and Cinnamon together; next clap on the blind Head, Lute fast, and digest 24 hours, when it must be left to run out into its Receiver (working tun), and as it is fit to set to Work, the yeast is to be put in, and leave it to work sufficiently, when it is to be turned up, and suffered to have Age, to mellow, and to become brisk to drink, and it will be excellent Liquor, very wholsom for Man's body."

(Worlidge, London, 1704)

Later books would record what had been known and passed around through word-of-mouth: adding a little orange powder would make London Ale, and ale made from scurvy grass was rich in Vitamin C and, according to the *Complete Family Brewer* (Philadelphia, 1805), "some cherry brandy thrown into the bung-hole would stop (beer) from fretting."

William Harrison, 15th century

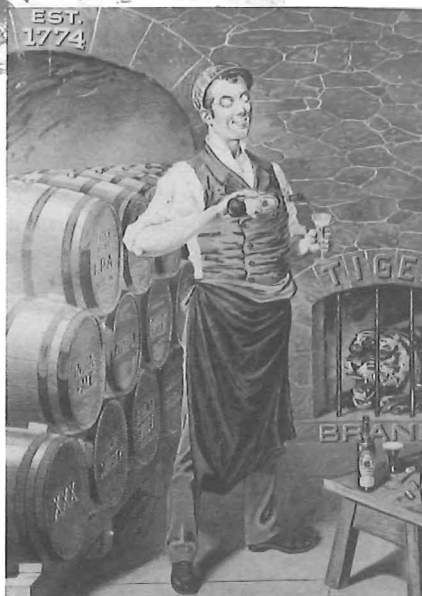
80 gallons water
8 bushels of malt
1/2 bushel of wheat meal
1/2 bushel oats
2 pounds hops



Top: Established 1857, Gustavus Bergner's Brewery would become the second largest brewery in America, circa the 1890s.

Center: Tin sign for Robert Smith Ale.

Bottom: Fermenting room of an unidentified brewery in Brewerytown, 1890s.



Gervase Markham, 1817

6 bushels malt
1 peck of peas
1/2 peck of wheat
1/2 peck of oats
1 1/2 pounds hops

Shibden Hall Museum brochure, circa 1718

63 gallons water
5 bushels of malt
6 pounds hops
1 quart yeast

George Watins, 1768

12 pails of water
5 bushels of malt
1 1/2 pounds hops
1 quart yeast

In 1788 Jeremy Belknap, Boston minister, sent his recipe for spruce beer to Philadelphia physician Benjamin Rush; "the most superlatively excellent beer in the world (is made) by boiling the spruce in maple sap; I know of no other liquor in the universe that can match it."

The price of beer in Philadelphia in 1811 was as follows: Table beer \$1 for small keg, \$1.50 for half barrel; Middle beer, \$2 per half barrel; Strong beer, \$3 per half barrel; Ale, \$2.33 per small keg; \$3.50 per half barrel. In 1790 Farnham hops were grown in Philadelphia.

Commercial Brewing Establishments

From the time of Penn's first visit to Philadelphia, brewers were practicing their trade. Two case studies provide a glimpse at firms that had roots in colonial Pennsylvania and went on to be successful industrial enterprises of the 19th and 20th centuries.

John F. Betz & Son Inc.

Robert Hare was the son of an English porter brewer. He emigrated with £1,500 from his father and

came to Philadelphia to establish a brewery that stood at the corner of Callowhill and New Market streets and was in business by the time of the Revolutionary War. Hare was aligned with those favoring independence. When British General Howe occupied the city from 1777-78, Robert Hare fled to Virginia leaving his brewery in the hands of British and Tory sympathizers.

Robert Hare and J. Warren are said to be the first two brewers to introduce

porter brewing to the United States. On July 20, 1788, George Washington wrote to Clement Biddle, importer and merchant, "I beg you will send me a gross of Mr. Hare's best bottled porter if the price is not much enhanced by the copious draughts you took of it at the late procession." A year later Hare was a delegate to the State Constitutional Convention and in 1795 he was made speaker of the Senate.

In 1789 George Washington presented his "Buy American" policy by stating he would drink only porter made in America. The porter Washington was drinking



Photos courtesy of the author

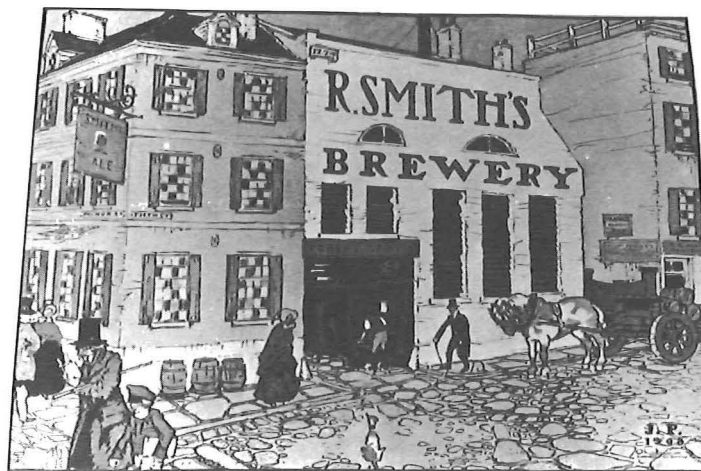
was that made by Robert Hare and shipped to Mt. Vernon.

In 1804 the establishment became known as the Gaul Brewery and was operated by Frederick Gaul, an experienced German brewer from Frankfurt-on-Main who emigrated to America prior to the Revolution.

John F. Betz came to Philadelphia in 1867 from New York, where he had been brewing for 14 years. He took a job at the Gaul Brewery until purchasing it in 1880. Prior to Betz's ownership, only ale and porter were brewed. Betz commenced brewing lager beer as well. John Betz became very active in the real estate market in the city. One of his other concerns was a beer garden at Riverside above the Wissahickon Creek on the Schuylkill River. He put in a line of little steamboats to carry his patrons up the river from Fairmount Dam. Betz produced an IPA of 6.5 percent alcohol by volume, and an East India Pale Ale at 7.5 percent alcohol by volume. The half-and-half was a mixture of two-year-old ale and stout, and Betz's Best was a lager that was said to rival Bavarian imports. The Betz brewery reopened after Prohibition and remained in business until 1939.

Robert Smith

Another brewer who withstood the test of time was Robert Smith. What was to become Robert Smith's Ale Brewery had its humble beginnings in 1774 when Joseph Potts established a brewery at Fifth and Minor streets in Philadelphia. During the British occupation of the



Drawing of Robert Smith's Brewery as it might have appeared.

city, the brewery was seized and used as a barracks.

In 1786 Henry Pepper purchased Potts brewery and operated it quite successfully. His wealth and philanthropy were demonstrated when he provided the clock and bell in the tower of Independence Hall. Upon his death in 1808 he donated large sums of money to many charitable and cultural institutions of the city. His son George headed the brewery and directed it successfully before leasing the establishment to Robert Smith.

In 1837 Smith came to America after having served an apprenticeship with the Bass Brewery in Burton-on-Trent, England. He began brewing on St. John Street near the Delaware River. He became acquainted with Pepper and Sickel and in 1845 purchased their brewery.

The Robert Smith India Pale Ale Brewing Co. was incorporated in 1887 and moved to a new plant at 38th and Girard. It operated until Prohibition as the oldest brewery in continuous operation in America. In 1891, Robert Smith was described as a "hale and hearty" 84-year-old who was still running the brewery. He died two years later and the business was reorganized as the Robert Smith Ale Brewing Co., owned by Schmidt's

of Philadelphia. The Smith brewery produced mainly ales and stouts. Production figures for the turn of the century are: 1902: 53,521 bbl; 1905: 61,910 bbl; 1907: 64,400 bbl. Brands included Tiger Head Ale, XXX Stout, Porter, IPA, Old Mystery, Imperial Burton and English Pale.

Lager Beer Comes to the New World

In 1840 John Wagner brewed America's first lager beer in a small home brewery at St. John Street near Poplar Street. He produced no more than about 500 barrels to a few thousand barrels per annum, but was able to keep his lager beer saloon going nearby on Front Street. In fact, if his saloon was like most of the day, the German immigrants quickly drained the supply of lager, encouraging brewers to build ever-larger breweries. One such establishment began renting lager beer vaults over in Brewerytown to meet the demand.

In 1849 Charles Engel and Charles Wolf purchased a property called Fountain Green on the banks of the Schuylkill River. They excavated the site and built underground vaults. Their brewery was to become the city's first large-scale lager beer brewery. Unfortunately, in 1868 Engel and Wolf's brewery at Fountain Green was demolished as part of the city's effort to remove all industry from the Schuylkill River above the Fairmount water works. Charles Wolf decided it was time to retire, and Charles Engel formed a partnership with Gustavus Bergner



An aerial view of Brewerytown in 1931.

who had built a brewery at 32nd and Thompson streets in 1857. The location of this establishment was just over the banks of the Schuylkill in what would become one of the world's largest brewing centers. Brewerytown, as it came to be known, was a seven-block industrial neighborhood consisting exclusively of breweries. This does not include all the breweries that abounded immediately outside the seven-block area (for example, Robert Smith just across the river).

The following account in the Philadelphia *Evening Bulletin* reminisced about a lost Philadelphia tradition: "... the air was as nourishing as vaporized bread. It seeped everywhere. . . (and it was). . . populated by brewmasters as ample in girth as the barrels among which they pursued their craft, by titanic drivers in leather aprons, by giant draft horses with backs broad enough to play pinochle on, by agile gymnasts, by musical maennarchor and flaxen-haired backfische. It was a place for family bakeries and rich delicatessens, a neighborhood scrubbed within an inch of its life and resounding to the guttural language of Goethe and Schiller. . ."

There was some mystery about the German beer gardens. They were supposed to shut down on Sunday. But according to our yellowed clipping, the "masses prefer the beer to the law, and the voice of the people is all powerful. It is a singular fact the most of the old mansions in the vicinity of the Schuylkill are being turned into beer houses. . . . The parlors, which were once solemn with gentility, are now gleeful with song, and under the paternal oaks the Teuton sits down to sport." The industrial neighborhood gave way to the neighborhood that extended much further. It was literally a piece of Germany in Philadelphia's backyard.

The Bergner & Engel Brewing Co. was incorporated in 1879 at 32nd and Master streets and grew to encompass 10.5 acres. B & E was the nation's second largest brewery by the turn of the century, producing a quarter of a million barrels of beer annually. The company was surrounded by other breweries that

made 100,000 to 200,000 barrels and many more in the 50,000-barrel range. In 1879 the entire production of the city was about equal to that of Schmidt's prior to closing in 1987.

When Schmidt's closed, it was the first time since William Penn described the "able man" William Frampton that the city had been without a brewery. The Schmidt's plant grew with the popularity of lager beer, being founded in 1860. It was a victim of the recent "beer wars" and had been producing

McSorley's Cream Ale and Prior Double Dark Beer. McSorley's was the closest thing to Schmidt's Tiger Head Cream Ale, a brand it acquired from Robert Smith in 1880. The company even used open fermenters and an ale yeast to make this last vestigial remnant of Philadelphia's English style beers.

Ale is Back in Town

After a two-year hiatus, Philadelphia is back in the beer business. While it can't compete with

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Schmidt's volume, the Samuel Adams Brew House is as fine a brewpub as you'll find anywhere in North America.

The Samuel Adams Brew House opened in November 1989 to a standing-room-only crowd. The beers currently available are Ben Franklin Gold (a classic "best bitter" style ale), Poor Richard's Amber (a classic English ale with red hues and a malt-hop balance that makes it a popular choice) and George

Washington's Porter (a heavy, dark, strong ale enhanced by a drop of honey to smooth out this potent brew that must certainly become one of the city's favorites!)

Philadelphia Brewers: Then, Now, Tomorrow

You've seen how Philadelphia became a mecca for brewing from the very start. British ales proliferated and were made by what would be called "brewpubs" today. The

wave of German immigration produced a thriving lager beer trade that lasted until very recently. They say history repeats itself. With the Samuel Adams Brew House, Philadelphia is back to one lone ale brewery. But the Dock Street Brewing Co. is preparing to open with an elaborate \$2 million dollar pub-brewery in spring 1991. What lies ahead is anybody's guess, but somehow I don't think we'll see the likes of Brewerytown again.



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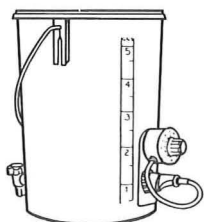
Rich Wagner has been home-brewing since 1983. He has demonstrated colonial brewing and malting techniques to historical groups (See *zymurgy*, Spring 1989, Vol. 12, No. 1). Since 1980, he and associate Rich Dochter have visited more than 400 sites throughout Pennsylvania and verified over 200 brewery buildings still standing. The two have conducted group tours of these buildings and a similar tour for the city of Pittsburgh sponsored by the Landmarks Foundation.

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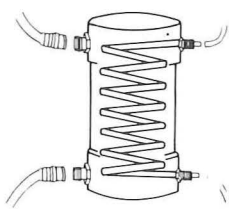
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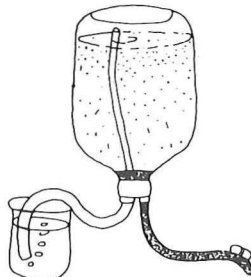
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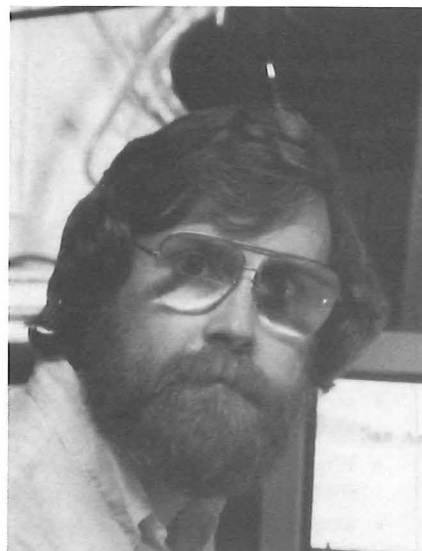
How to pack your beer

developed little rituals around packing up the brews to ensure a safe journey and possibly a winning position. One box had some poker chips tossed in amid the Styrofoam and plastic wrap. Still another had a plastic Hawaiian lei encircling the bottles. And to whomever sent the dog biscuits, thanks, they went great with the porter I was drinking at the time. Homebrewers are a strange lot. . .

Anyhow, as I was talking to myself one rather lonely evening, surrounded by cases of Liberty Ale and heaps of excelsior and Styrofoam popcorn (or ghost droppings, as one friend calls them), I thought I might put this experience to some practical use by pointing out a few things about shipping beer, particularly to competitions, from the unpacker's point of view.

What struck me as I tussled with many of these stubborn packages was the unavoidable mishandling that the beer received as a direct result of the style of packaging employed. That is to say, the harder it was to liberate the bottle from its wrappings, the worse the beer was handled. For example, bottles that were rolled up in

multiple sheets of paper (news or other) or some other wrap, were almost impossible to get at without unrolling. The quickest way to do so was to hold the package in one hand and pull the roll away as if it were a window shade. Think about how much



RUSS WIGGLESWORTH

Last June I had the pleasure of spending a week at the Anchor Brewing Co., for the most part living out of their walk-in cold box. Why? I was unpacking and sorting the second-round entries for the 1990 AHA National Homebrew Competition. I use the word "pleasure" because any excuse to spend time in one of America's finest breweries, especially behind the scenes, is pure pleasure to me. Even a week wrestling with some of the most stubborn packaging this side of UPS was worth it.

There were certainly some strange items included with the beer in a few of the packages. I'm beginning to believe that homebrewers have



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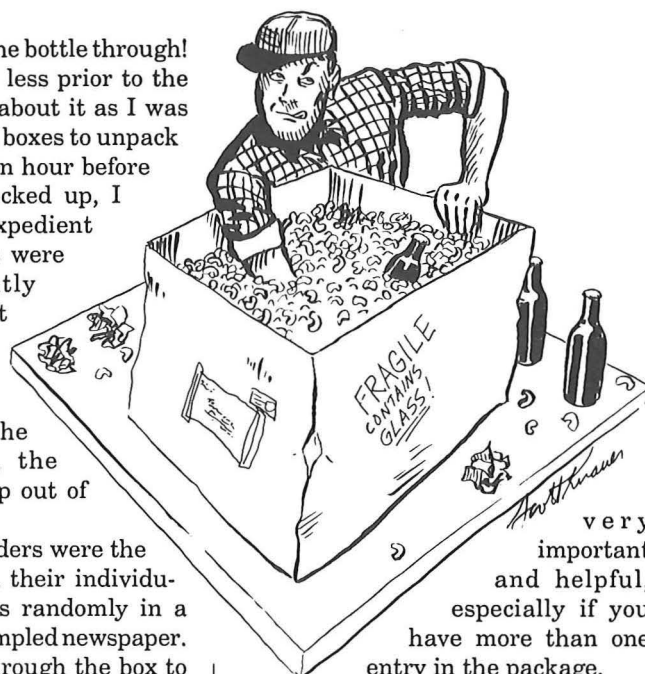
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agitation that puts the bottle through! And only a week or less prior to the judging! I thought about it as I was doing it, but with 50 boxes to unpack and sort, and only an hour before the Anchor folks locked up, I had to take the expedient road. Some entries were wrapped so tightly around the neck that even when the bottom of the bottle was exposed by tearing away the packing material, the bottle would not slip out of its protective jacket.

The worst offenders were the brewers who placed their individually wrapped bottles randomly in a sea of popcorn or crumpled newspaper. First I had to dig through the box to find all the solid objects, then unwrap each one. Not only does this disturb the beer via the movement involved, but I almost missed some of the bottles because they were so well disguised as packing material! Almost no one indicated on the outside of the box how many items were inside. This is



very important and helpful, especially if you have more than one entry in the package.

These hard-to-get-at beers make a lot of extra work for the people at the receiving end. They delay the job by making it very strenuous, time consuming, and therefore frustrating. And, as the level of frustration rises, the care given to the task at hand tends to erode away. Sorry to say, but we are only human! When we get tired, we get careless. In spite of this, I'm happy to report that none of the breakage was caused by any of the Bay Area volunteers, myself included.

What seemed to work the best were the boxes that provided a separate compartment for each bottle. Often it was a wine box with the dividers intact. Newspaper or foam was stuffed into the bottom of each compartment to a depth of about 3 inches. Then the bottles were placed and secured with more stuffing material around the neck. Generally the compartments bordering the outside of the box were not used for bottles, but were filled with stuffing. These boxes are easy to open and empty and give plenty of protection.

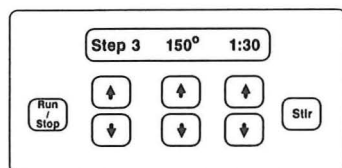
Using a six-pack holder also works; however, it is best to put only three bottles in each holder. Place the three bottles in the alternate holes so the risk of glass contacting glass is reduced. Fill the unused holes with a wad of newspaper. Also, bag each six-pack in plastic or paper to make sure the bottles stay in the holder. Pack the holder in a box that leaves at least 2 inches of space in all directions for

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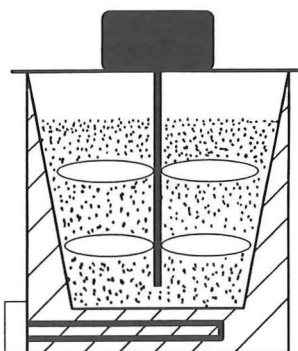
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packing material. Combining a six-pack holder with a box made of Styrofoam works quite well. Check your local hospital or blood bank for boxes used to ship lab samples and blood supplies that must be kept cold.

Another system that works well is the "box in a box" method. The beer is packaged securely in a box that is just a bit larger than the bottles it contains (perhaps a 12-pack box from Anchor or Henry Weinhard's) with a layer of newspaper or foam sheets stuffed between the necks of the bottles. This box is then packaged inside another box that is large enough to create about a two-inch space all around the first box. This space is filled with shock-absorbing material to prevent anything from penetrating the outer box and reaching the inner one should mishandling occur. This method requires that two independent layers of cardboard be broken before the beer is actually exposed. And it does manage to keep multiple entries gathered together in one tidy spot.

Several brewers sent their entries packed in tubes. I used to think this was a good way to go—they're easy to pack, very sturdy and make a nice package. However, I found that the tubes are very hard to unpack, especially if long enough to accommodate three bottles. Forget the tubes, unless you incorporate them into a larger box and simply use them as dividers.

As for packing materials (outside the environmental issues) keep in mind how difficult it can be to keep those Styrofoam things contained. If you can, bag the popcorn first, then use it like a pillow and stuff it around the beer in the box. Crumpled newspaper is much easier to control and it is much more biodegradable. Several brewers used vermiculite, that stuff you mix with potting soil to improve drainage. Boy, were they nasty boxes! I suppose I should be happy that no one thought to use spent grains as insulation—oops, forget I mentioned that idea!

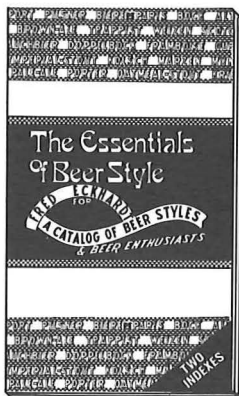
When it comes time to secure the box it is not necessary to use all of the tape on the roll! Use just enough to keep the box closed and the edges sealed. A little added support across the bottom of the package doesn't hurt, but don't wrap the entire box in tape.

Here are the high points:

- If you feel you must wrap each bottle, use a material that can be torn away, allowing the bottle to be slipped out without rolling.

Padded paper or foam sheets are available from most moving and storage companies or packaging stores.

- Use dividers to keep the bottles



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apart. Cushion the bottles at the bottom and immobilize them with packing material around the neck and top.

- Leave about 2 inches around the perimeter of the box in all directions for cushioning material.
- When using Styrofoam chips or popcorn, bag them first and then pack the "pillows" to keep the stuffing under control.
- Don't use cardboard tubes except

as dividers inside boxes.

- Don't overtape the box.
- Indicate on the outside of the box how many "items" are contained inside. You don't have to be explicit, just say "contains three pieces."
- Rubber-band the entry form to the bottle with the brewer's name facing out.
- If several different brewers' entries are sent in one box, be sure

detailed information is included to identify each entry. Also, if the entry fees are paid for with a single check, be very clear on how the payment is to be divided.

- Don't place paperwork just below the top flaps of the box, on top of the packing material. All too often this results in a shredded check or entry form, as we knife through the box to open it. Put the paperwork in a plastic bag, wrap it around a bottle, and secure it with a rubber band.
- Be sure to *clearly* print the destination address as well as your return address on the box in waterproof ink. Then even if a bottle does break and make the paperwork inside unreadable, at least you are identified on the box.
- Of course, always mark the box to indicate which end is "up" and that the contents are "fragile."

I realize that I have not hit upon every point here. These are simply the ones that came to mind as I worked through the boxes in June. For more pointers talk with other experienced brewers, especially those who have entered some distant competitions. And, if you have any unique suggestions, let them be known!

Russ Wigglesworth is editor of the *San Andreas Prost*, newsletter of the San Andreas Malts in San Francisco.

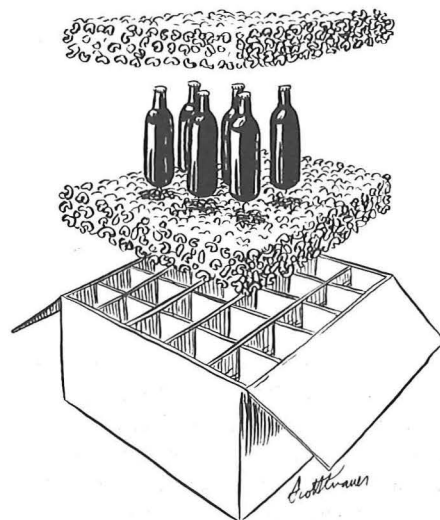




Illustration by John Martin

Active Dry Yeast for the Homebrewer

Many homebrewers have misconceptions on how dried yeast is made and how to use it correctly in starting a batch of beer.

Yeast grown in a homebrew fermentation produces a limited number of yeast cells and ethanol as a desired product. An expression of this type of fermentation is:

Maltose + Amino acid →
100g 0.5g

Yeast + Ethanol + Carbon Dioxide + Energy
5g 48.8g 46.8g 50 kCal

The producers of dried yeast wish to maximize the yield of yeast cells, so they recommend using a fermentation with vigorous aeration. The expression for this type of fermentation is:

Molasses + Ammonia + Oxygen →
100g 5g 51g

Yeast + Water + Carbon Dioxide + Energy
48g 35g 75g 194 kCal

The amounts of yeast cells produced are in dry weight. As you can

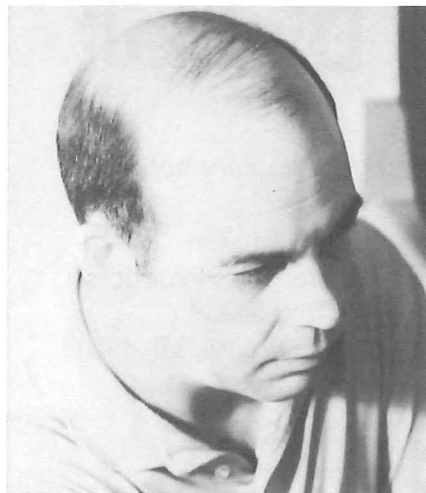
see, the production of brewer's yeast under aerobic conditions produces much more yeast and energy than an anaerobic fermentation for beer production.

Some homebrewers believe that the dried yeast is a freeze-dried product. The dried yeast for brewing (and winemaking) is produced by removing water from the yeast with warm air to a carefully controlled level. Brewing yeast that has been freeze-dried has poor viability, so this process is not used commercially.

Yeast is produced under food-level sanitary conditions. Some bacterial and wild yeast contamination is almost inevitable, but producers try to keep such contamination low. The yeast is propagated in large open vats or closed tanks with vigorous aeration of the beet-cane molasses wort. Ammonium phosphate salt and other minor minerals and nutrients are added for growth. The concentration of the sugar-molasses in the wort is kept under 0.1 percent to prevent the fermentation from shifting to an anaerobic fermentation with production of alcohol with low yeast

cell yield. Additional molasses is added during the fermentation as required.

After fermentation is complete, the yeast is removed by centrifugation, washed and pressed into a cake to remove excess water. The crumbly yeast cake is forced through a perforated steel plate to form noodles that are broken up and dried to a final



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moisture level of about 5 to 8 percent. The yeast is dried by running the particles on a conveyor belt of stainless-steel screening through a tunnel of warm air. Some producers place the yeast on trays and dry it in warm ovens. Others use rotary drums or air lift columns to tumble the yeast particles in warm air until dried to the desired degree. The dried yeast is then packed in small foil-plastic laminated packages and flushed with nitrogen before sealing.

The viable population of dried yeast when manufactured is typically 10 to 20 billion cells per gram. One manufacturer of dried beer and wine yeasts specifies that 70 percent by weight of the dried pellets consists of yeast cells. During the first month of storage at 70 degrees F (21 degrees C) the viability drops about 10 percent. Thereafter the viability drops at least 20 percent per year at this temperature and 5 percent or more per year at 38 degrees F (3.5 degrees C). Storage at temperatures around 100 degrees F (38 degrees C) can cause a considerable drop in yeast viability in a short time, so dried yeast held in a non-temperature controlled warehouse during summertime in a place such as Arizona can result in sluggish starts in homebrews.

Packages of dried yeast obtained at homebrew supply stores and tested in my microbiology laboratory had widely varying viable counts, ranging from 200,000 to 12 billion cells per gram. Except for the Paul Arauner yeast, there was no consistent correlation between the brand of dried yeast and viability. The Arauner brand was packaged in paper envelopes that provide no protection from moisture or oxygen and was always found to be low in viable yeast.

I examined 10 different brands of dried brewing yeast and found that only two of these had correct rehydration instructions printed on the packages. For example, the instructions on one package erroneously recommended that the homebrewer sprinkle the dried yeast on the surface of the cooled wort. Yeast dried to a low water content has good stability but is sensitive to the temperature of the water used to rehydrate it. If the yeast is rehydrated in cold water, up to 25 percent by weight of the yeast

soluble solids is leached out. The resulting viability is typically 10 percent. Dried yeast produced experimentally with a moisture content of 2.5 percent has excellent keeping properties, but it must be rehydrated with water vapor rather than warm water to give good viability.

Rehydrating Dry Yeast

A package of dried yeast should be rehydrated in about one-fourth cup of sterile water at a temperature of 95 to 105 degrees F (35 to 40.5 degrees C) for five to 10 minutes. The yeast is not harmed by this short period of warm rehydration, and the viability is improved. Rehydrating in warm wort or sugar solutions rather than sterile water will result in reduced viability and retard the yeast's initial growth. Yeast cells suspended in warm wort, 104 degrees F (40 degrees C) or a fermentable sugar solution will literally explode. Moreover, the dried yeast has a storage carbohydrate (trehalose) that provides sufficient energy for the initial growth, so any added sugar present during the rehydration phase is unnecessary.

Making a Starter

Prepare a starter by adding enough malt extract to water to give a gravity of 1.040 to 1.050. Do not make higher gravity starters, because yeast growth may be sluggish. Rinse out a bottle with boiling water. Dip the bottle cap in the boiling water to sanitize it. Boil one quart of the malt extract solution for 10 minutes and pour it into the hot bottle. Recap and cool to room temperature of 75 degrees F (24 degrees C).

After rehydrating for 10 minutes, add it to the quart of starter. Avoid dumping the rehydrated yeast directly into wort chilled to 45 degrees F (7 degrees C), because this can increase the number of respiratory deficient (petite) mutants. Respiratory deficient mutants produce high levels of diacetyl and esters. Leave the yeast in this starter a few hours or overnight before pouring it into your fermenter. Rouse or aerate the wort when the starter is added to stimulate the initial growth of yeast cells. To ensure a

rapid start of fermentation, the temperature of the wort in the primary fermenter should be about 60 to 65 degrees F (15.5 to 18 degrees C) when the yeast starter is added. If a lager beer is to be made, place the fermenter in a refrigerator a few hours after the yeast starter is added.

When making a starter for a five- or six-gallon batch of beer, use a minimum of one seven-gram package of yeast or two seven-gram packages if you feel the yeast is old or has a low viability. If the yeast is sluggish when dumped in, using two packages or purchasing a fresh package is recommended. For larger batches of 10 gallons of beer, begin with a larger volume of starter and an additional seven-gram package of yeast.

Problems with Dry Yeast

In addition to having wide differences in yeast viability, some samples also have considerable contamination from bacteria and wild yeasts. Very few homebrewers have microscopes and culture equipment to examine dried brewing yeast for bacterial and wild yeast contamination, but they should not despair of producing good beer with dry yeast, because they can evaluate the quality of yeast before using it.

Here is how to do it:

Purchase several different brands of dry yeast from your local homebrew supply store. Dissolve enough light dry malt extract in water to give a gravity of 1.040. Boil this wort for 30 minutes, then pour the boiling hot wort into hot sanitized quart bottles (one bottle for each yeast sample) until they are about three-fourths filled. Use no hops, because you wish no hop bitterness or aroma to obscure any off-flavors or aromas from the test ferments. Fit each bottle with an airlock and cool to room temperature. Rehydrate about two grams of yeast with warm, sterile water as described and inoculate the quart bottles of wort. Ferment at 60 degrees F (15.5 degrees C) to minimize production of esters or fusel oils by the brewing yeast. You can estimate viability by noting how fast the airlocks bubble during the first few days of fermentation. When fermentation stops, refrigerate the


bottles at about 38 degrees F (3.5 degrees C) for one week to settle out the yeast cells. Invite several of your homebrewing friends over for a tasting session. It is not essential for the beer to be carbonated for tasting, because off-flavors and aromas can be detected easily in the flat beer. Participants should note any sour, phenolic, solventlike and diacetyl aromas or flavors characteristic of bacterial or "wild yeast" contamination.

I have found this test correlates very well with cultural and microscopic examination of the yeasts in my laboratory for contaminants. All yeast samples that had a mild, yeasty flavor by taste test had little or no detectable contamination by laboratory examination. Go to your homebrew supply store and buy several packages of the same lots of dried yeasts that you have found to have good viability and no off-flavors. Keep the dried yeast packages in a refrigerator at 38 degrees F (3.5 degrees C) to preserve their viability until used.

Final Comments

Inform the homebrew supply store of dry yeast samples you feel have low viability or contamination so they can

give feedback to their suppliers on the quality of dry yeast they receive. I am often asked which is the best dry yeast. I have not found a particular brand that was always of good viability and free of bacterial or wild yeast contamination from sample to sample. If pressed, I find Whitbread dry yeast usually to be of good quality for those brewers who refuse to make a taste test of yeasts.

I recommend that you do not save an opened package of dried yeast. The storage viability of the dried yeast is improved when oxygen is excluded by the nitrogen flushing of the package. An open package of yeast may also pick up moisture, resulting in rapid loss of viability. 

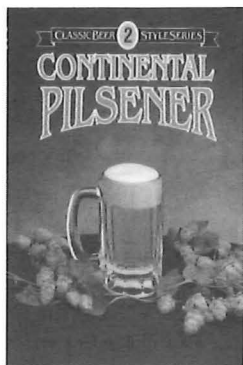
Rodney Morris of College Station, Texas, has been brewing for more than 16 years. A Malthopper since the club was formed six years ago, he was previously a Maltose Falcon. Morris became interested in homebrewing while in the army. He developed a taste for European beers but found that the quality varied too much. Among his many accomplishments is the invention of the Recirculating Infusion Mash System.

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The Trouble with Trub



ot break and cold break—most homebrewers know them only as the “scum” on the bottom of the fermenter or brew

kettle. But certain constituents of trub can be detrimental to beer flavor. For example, polyphenols present in the hot break are major players in the staling of beer and increase instability. Hot break and cold break should be removed before fermentation to create easy access for the yeast to the nutrient base, as well as to delete negative flavor components.

Professional brewers use a vari-

ety of techniques to remove trub. Most could be applied to homebrewing with some ingenuity and a little mechanical know-how.

Hot Break Formation

Hot break, formed during the boiling process, is the result of coagulation of high molecular nitrogenous compounds, primarily protein and polyphenolics. The chemical composition is as follows:

Protein	40 to 65%
Bittering substances	4 to 8%
<i>(primarily alpha and isoalpha acids)</i>	
Fatty acids	1 to 2%
Polyphenols	4 to 8%
Carbohydrates	4 to 10%

(From U. Biermann, dissertation for Technical University of Munich, 1984)

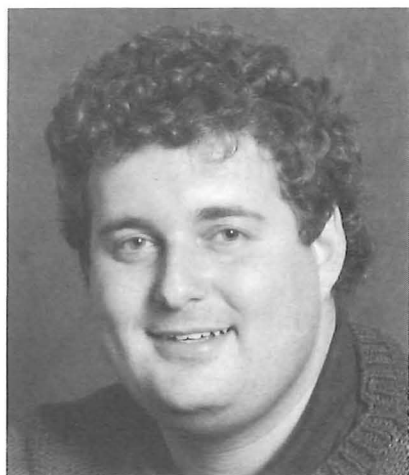
Hot-break globules range in size from 30 to 80 microns. The quantity of hot break formed during the boiling process is 7.58 to 15.15 ounces of water-free trub per five gallons of hopped wort. Variables affecting the hot-break formation are the malt quality, mashing process and wort concentration. The quantity of hot break is inversely related to the temperature during the kilning process of the malt:

the higher the kilning temperature, the lower the hot-break quantity. Furthermore, decoction mashing produces lower quantities of hot break. This can be attributed partly to some coagulation that occurs during the mashing process and to filtering by the grain bed during the lautering process. Finally, higher wort concentrations produce proportionately more hot break than lower concentrations.

Incomplete hot-break removal results in agglutination (clumping together) of the yeast during the fermentation process and a decrease in the yeast's life span. Hot break also contributes to negative beer attributes: raw, coarse bitterness, dark color, poor foam stability and short flavor stability.

Cold Break

Cold break refers to the particulate haze formed during the cooling of hopped wort under the temperature of 158 to 131 degrees F (70 to 55 degrees C). Cold break has a particulate size of 0.5 to 1 micron. Cold break is composed primarily of protein, polyphenols and carbohydrates and varies in accordance with the percentage of difference in extract between fine and coarse grinds, which is also a measure of how well-modified the malt is.



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Fine/coarse difference

	4.7%	2.1%	1.3%
Cold break (g/100 liter)	30.9	27.3	22.1
Protein	53.6%	50.6%	52.7%
Poly- phenols	11.4%	25.4%	25.5%
Carbo- hydrates	33.4%	21.2%	21.0%

(Ludwig Narziss, K. Bauer published in *Brauwelt* No. 28, 1975)

Well-modified malts shift the composition in the direction of polyphenols and away from protein. The carbohydrates in the cold break are primarily beta-glucanes. Polyphenols hasten oxidation, and beta-glucanes are proteins that serve no useful purpose, though they do not harm beer flavor. They are the cause of many stuck mashes, however, and high concentrations are often the result of using poor malting techniques or sometimes wheat malt.

The cold-break quantity is approximately 15 to 35 percent of the hot-break quantity. The origin of the cold break has been traced to beta globulin and hordein proteins from barley. Cold-break quantity also is inversely proportional to the degree of cooling. The colder the final cooling temperature, the greater the break quantity. The largest quantity of precipitate occurs during the drop from 80 to 68 degrees F (30 to 20 degrees C) and from 68 to 50 degrees F (20 to 10 degrees C). The quantity also

is inversely related to the intensity of the mashing process. For example, a three-mash decoction process yields a lower quantity than a infusion mashing process.

Finely ground malt leads to larger quantities of cold break because of the increased extraction of polyphenols from the pulverized husks. A quick cooling in conjunction with strong movement creates a more thorough flocculation of cold break. Inefficient cold break separation results in poor filterability and a weak clarification of the cold hopped wort.

The consensus on cold break influencing the flavor of the beer is mixed. It is well-documented that total removal of cold break creates negative attributes for the fermentation cycle and the final flavor spectrum. For instance, complete cold-break removal before fermentation often leaves the beer with an onionlike quality. Cold-break removal also creates a lagging fermentation caused by the lack of any essential fatty acids. (Schurr, F.; Pfenninger, H.B.; *European Brewing Convention Proceedings*, 1977). However, the advantage of cold-break removal is apparent with respect to vitality of the yeast

reuse. The smaller amount of cold break coats the yeast less with the slimy substance, therefore, enabling longer vitality for future use.

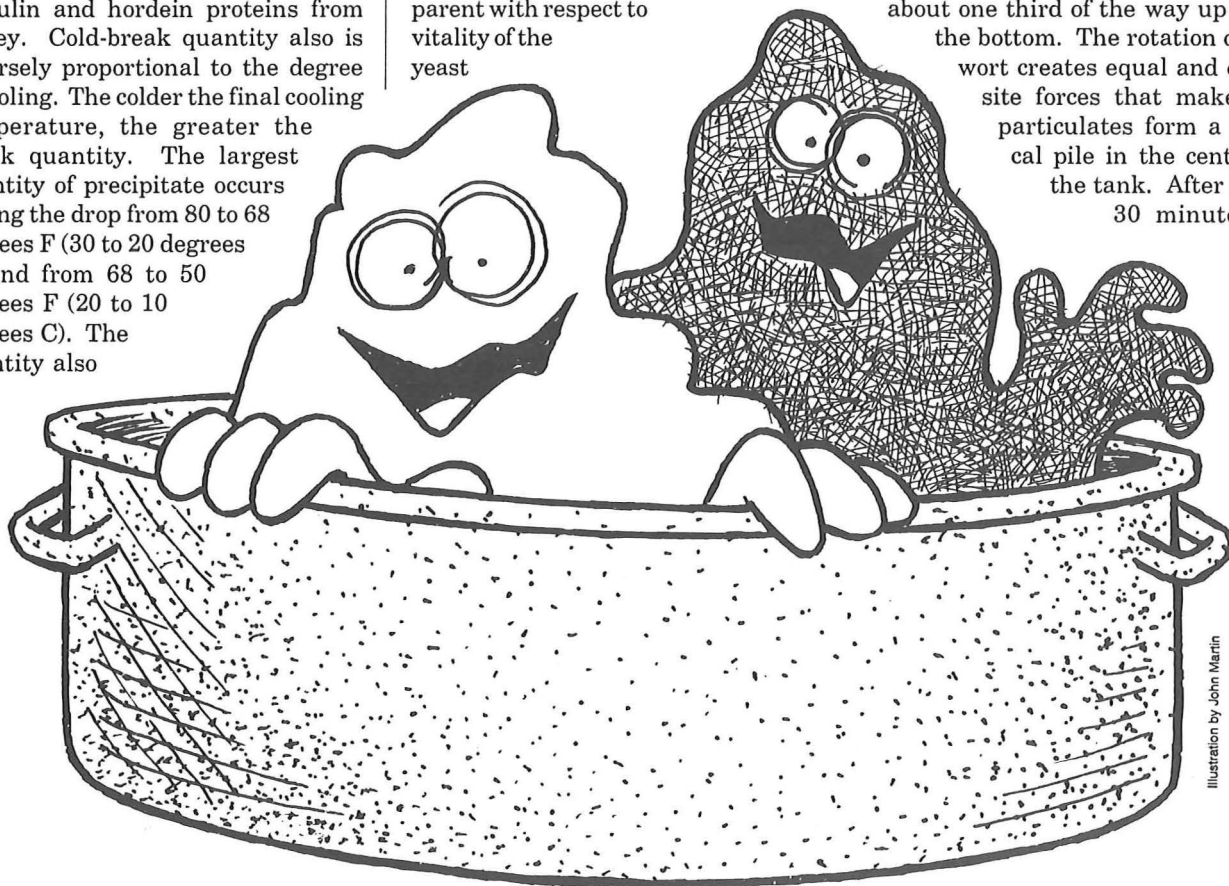
Methods of Hot-Break Removal

Settling Tank

The settling tank is the simplest and oldest method of removing hot-break, when the particulates settle at the bottom (see Illustration 1, next page). Clear wort is drawn off after 25 minutes. Automated systems have a turbidity meter to check clarity, while with manual methods the brewer stops transferring when trub begins to be drawn off and shows up in a sight glass. This type of configuration also can be applied to a flat or slightly convex brew kettle.

Whirlpool Process Tank

The cylindro-conical whirlpool tank is the most widely used vessel for hot-break and hop-particle removal (see Illustration 2, next page). Hot wort enters the tank at a high velocity about one third of the way up from the bottom. The rotation of the wort creates equal and opposite forces that make the particulates form a conical pile in the center of the tank. After 25 to 30 minutes of





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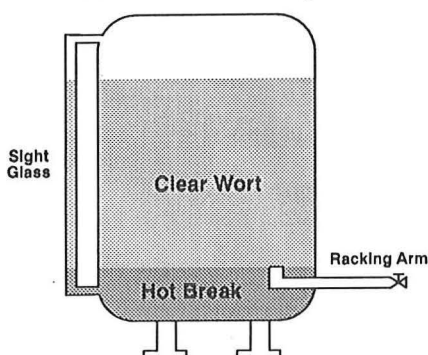
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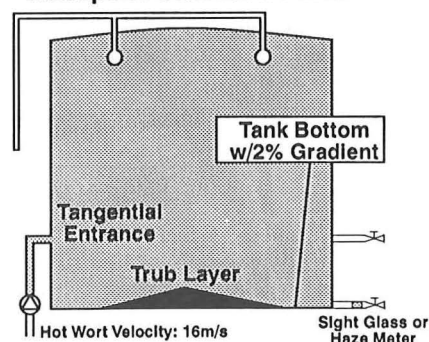
Illustration 1. Settling Tank



settling, the hot wort is pumped through the wort chiller. Many homebrewers use a similar system in their brewpots, stirring the hot wort into a whirlpool and siphoning clear wort into the chiller from the edge of the brewpot.

The change in wort characteristics from the whirlpool process is primarily a factor of time and oxygen contact. The longer the wort sits in the whirlpool the darker the wort color will be because of air contact. Note that the smaller of the whirlpool entrances causes less color change than the larger, and even the smaller one is

Illustration 2. Whirlpool Standard Form



much larger than most homebrewers would use. The whirlpool kettle causes the least color change, as demonstrated in Table 1.

The oxidation of the polyphenols and free fatty acids will produce a "cardboard" flavor in the final product. It is therefore important to whirlpool and cool in as short a time as possible.

Centrifuge

The centrifuge is a viable alternative to the whirlpool. The principle of the centrifuge is basic. The gravitational force exerted during the sedi-

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mentation process of the settling tank or whirlpool is replaced by the centrifugal force generated by the rotating plates of the centrifuge. The sedimentation process is thereby accelerated. The particulate range is selected by varying the speed and diameter of the centrifuge chambers. These two variables affect the centrifugal force exerted on the particulates, and thereby determine the particulate size based on diameter and density.

In rare cases the centrifuge has been known to modify protein molecules because of the extreme forces, thus producing a slightly sulfuric-yeasty aroma. On the positive side, however, the thermal exposure is reduced by bypassing the settling time necessary with the whirlpool. The entire break removal and cooling process is shortened from 90 minutes to 60 minutes.

Diatomaceous Earth Filtration

Diatomaceous earth filtration is the newest method of hot-break and cold-break removal. In one fell swoop, both of these particulate groups are removed from the wort. The main side effect of DE filtration is that it is so effective that it "strips" some of the flavor out of the wort leading to a less full-bodied final product. Some filters available to homebrewers (such as the Marcon) can take DE plates, and DE can be adapted into Rodney Morris' homebrew filter system (*zymurgy* Vol. 13, No.2).

Editor's Note: These methods all present possibilities for innovative homebrewers. Visions of converted washing machines and surplus lab centrifuges come to mind along with simple adaptations right in the brewpot. Dan Gordon is director of brewing operations and chief financial officer for Gordon Biersch Brewing Co. in Palo Alto, Calif. This article was adapted from his lecture at the Institute for Brewing Studies' 1990 Microbrewers Conference in Denver. Complete transcripts are available in the book, *Brewing Operations Vol. 7*. See the Beer Enthusiast Catalog.

Table 1. Wort Color with Whirlpool Variations*

EBC Color Units	Time (m)	Whirlpool Entrance		Whirlpool Kettle
		50 cm	10 cm	
Begin pumping	0	11.0	11.0	11.0
Finish pumping	20	11.8	11.4	
Begin cooling	60	12.5	11.8	11.3
Middle of cooling	100	13.0	12.3	11.7
End of cooling	140	13.6	12.7	
Average		13.0	12.2	11.5

* Ludwig Narziss, *Brauwelt* 114, 1974

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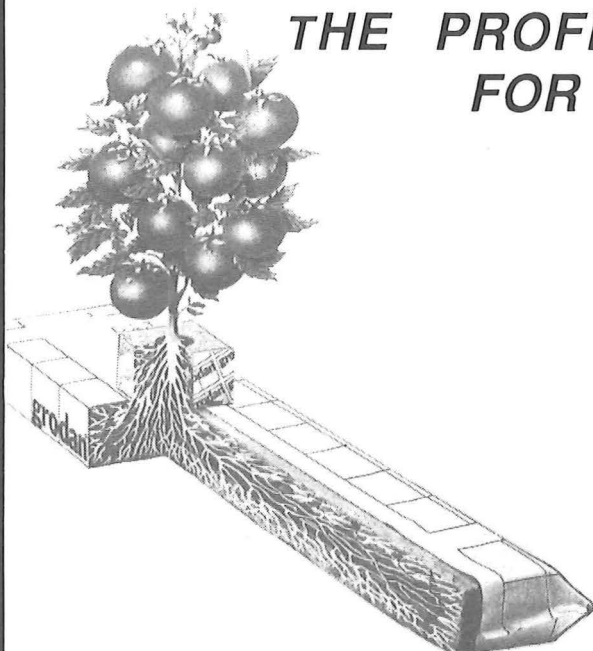
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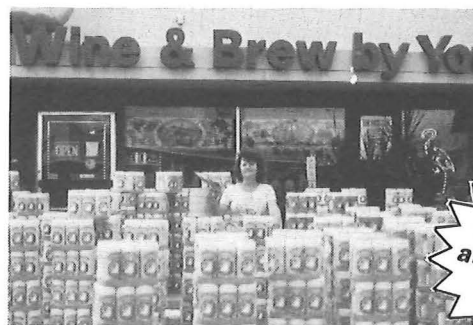
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FOR THE BEGINNER

ALBERTA RAGER

Oxygen and Beer

A Matter of Timing



xygen is both a necessity and a villain to the brewing process depending on the point of introduction. Oxygen is necessary to ensure healthy yeast growth. But once the yeast has been pitched, wort and oxygen cease to complement one another.

The Need for Oxygen

The initial stage of the life cycle of the yeast—called respiration—requires oxygen. The yeast utilizes “free oxygen” in the wort and sugar to store energy for the remainder of its life cycle. There is no disadvantage to having too much oxygen in your initial wort. But too little can result in sluggish, stuck or incomplete fermentation. Oxygen can be dissolved in the wort at this point by aeration—splashing or agitating the cooled wort as it is transferred to the fermenter prior to the pitching the yeast. Capping the carboy and shaking or rolling it vigorously also is effective. On the other hand, oxygen introduction after fermentation has begun, more than 24 hours after yeast pitching, is usually deleterious.

Oxygen and Fermentation

Oxygen that was dissolved into the wort during transfer

and not used during the respiration cycle is driven off by carbon dioxide during fermentation while alcohol and beer flavors are being produced. The introduction of oxygen during this stage is undesirable. Not only is the introduction of bacteria and contamination with oxygen likely, but the production of undesirable oxidation characteristics such as browning, sherrylike aromas, vegetable characteristics and diacetyl is increased. Therefore, care should be exercised in preventing oxygen from contacting the fermenting wort. This can be accomplished by fermenting under closed conditions using either a blow-by or an oversized fermenter.

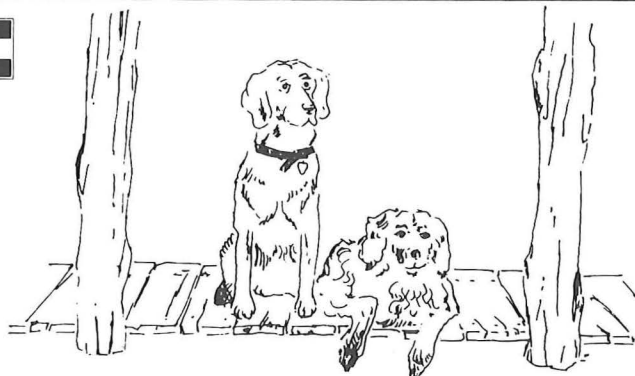
If using a blow-by system, sterilize a drilled stopper and siphon hose that has been placed through the hole in the stopper. Place the stopper in the opening in the carboy and the end of the hose in a container (i.e., milk jug, bucket, jar, etc.) of chlorine solution. For the first two to three days of fermentation, the blow-by will direct the overflow of fermenting foam into the awaiting container.

This overflowing foam contains hop resins and yeast that can cause excess bitterness in the finished beer. When the activity subsides, after about three days, replace the blow-by with a fermentation lock half-filled with water. A fermentation lock serves as a

one-way valve that allows the carbon dioxide produced during fermentation to escape while preventing oxygen, bacteria and airborne beasts from contacting your fermenting beer.

An oversized fermenter can be a carboy that is a gallon or so larger than the volume of wort, or one of many plastic single-stage fermenting buckets obtainable at your local homebrew supply shop. Fit the opening in your fermenting vessel with a sanitized drilled stopper and a half-filled fermentation lock. During the active fermentation period, foam, along with hop resins and yeast, will rise. As the fermentation slows and the foam falls, the hop resins and





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yeast (which can contribute excessive bitterness to the finished beer if left in contact with it for too long) will cling to the sides and/or shoulder of the fermenting vessel.

In a closed fermentation system, the air (oxygen) layer that sits atop the cooled wort when the yeast is pitched is quickly replaced with a layer of carbon dioxide once fermentation begins. Either of the methods mentioned above is easy and efficient. A

two-stage fermentation system is only recommended when making high-gravity beers like barley wines and bocks that require a fermentation period in excess of two weeks or when lagering (a prolonged period of maturation in the cold).

Many authors and recipes will recommend taking daily hydrometer readings and skimming the hop resins off the fermenting wort. Because these practices allow oxygen and pos-

sible contamination to come in contact with the fermenting beer, I do not recommend them.

Racking and Bottling

Do *not* aerate or splash the beer when bottling. Siphon the beer off the sediment into a cleaned and sanitized container, taking care not to splash while siphoning. This minimizes the amount of oxygen dissolved in solution and therefore reduces the acceleration of oxidation and chance of contamination. Gently stir the priming sugar (i.e., three-fourths cup of corn sugar boiled with a small amount of water per five gallons of beer) into the beer, making sure it is thoroughly disbursed but not agitated.

Gently siphon into clean, sanitized beer bottles and cap. Placing the siphon hose on the bottom of the bottle will reduce the volume of beer exposed to the oxygen. Bottles should be filled within one-half to one and one-half inches from the top. The beer will react with oxygen in the bottle. The greater the amount of oxygen in the bottle, the faster the oxidation process, which may result in prematurely stale-tasting beers.

Summary

Oxygen is essential to the life cycle of the yeast during respiration. But, once fermentation has begun, extreme caution should be exercised to minimize any contact between the fermenting or finished beer and oxygen. Aerate or splash the cooled wort into the fermenter prior to pitching the yeast. But, once the yeast is pitched, siphon carefully and gently to minimize introducing oxygen into the beer. Always protect fermenting beer by using a fermentation lock. Relax, watch the CO₂ escape and have a homebrew!



Alberta Rager, a founding member of the Kansas City Bier Meisters, has been brewing for six years. She is one of the managing partners of Bacchus & Barleycorn Ltd., Merriam, Kan., a BJCP National Beer Judge, and has conducted BJCP exam study sessions for three years. The numerous ribbons displayed in the shop, won in competitions all over the country, are evidence of her brewing skills.

WINNERS CIRCLE

DAN FINK



h, springtime! The last of the winter doppelbock has just been drained, and the glass mouths of a row of fermenters are singing sweet, seducing songs of summer beers waiting to be brewed. Succulent steams, quenching Pilseners, cream ales and weizen beers, traditional exports and continental darks all lined up in the brew logbook, waiting for the chance to jump into the carboy.

A word of congratulation to Tom Altenbach of the Draught Board, who won the 1990 Best of Fest club-only competition with his *Alt n' Bock Fest Beer*, (recipe included here). This was Altenbach's second club-only victory in 1990; he took the Bock is Best competition also! If you brew it and put it away to lager cold over the summer, you'll have crystal clear, copper-colored mugs of cool Oktoberfest waiting come fall.

Here are eight winning recipes from the 1990 National Homebrew Competition. Six of them won second-place honors and two took third-place ribbons.

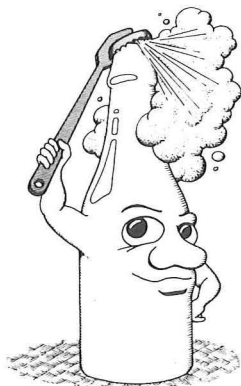
Fire up those brewpots and get your stock of summer beers ready. What could go better after a long hike in the woods than a tall, stemmed glass of fresh Pilsener or cream ale? Or a weizen in a narrow glass with a wedge of lemon after running in the sun? How about a fresh export with the first salad greens of the summer, followed by a continental dark with dinner? Ah, we're looking forward to the warm days ahead.

STEAM BEER*

Second Place
Ralph Housley
Sacramento, California
"Sacramento Steam Beer"*

Ingredients for 5 gallons

- 3 pounds Glenbrew malt extract
- 3 pounds Tom Caxton lager malt extract
- 1/4 ounce CFJ90 hops (45 minutes)



*The term "steam" beer is trademarked by the Anchor Brewing Company and may not be used by other breweries for commercial purposes.

- 1/4 ounce CFJ90 hops (10 minutes)
- 1/4 ounce CFJ4 hops (10 minutes)
- 1 ounce CFJ90 hops (two minutes)
- 3/4 ounce CFJ4 hops (dry hop—two weeks)
- Wyeast liquid lager yeast
- corn sugar to prime

- Original specific gravity: 1.046
- Terminal specific gravity: 1.012
- Primary fermentation: 16 days at 65 degrees F (18.5 degrees C) in glass
- Secondary fermentation: six weeks at 65 degrees F (18.5 degrees C) in glass
- Age when judged (since bottling): two months

Judges' comments

"Predominant hop nose, slight diacetyl. Color appropriate."

"Very drinkable. I would have a few of these. If you can make it richer it may be worth a try. Otherwise, good as is."

"Good malt-hop balance, slightly sweet. Body appropriate for style. Slightly on the sweet side. Very good beer."

"Great appearance—perfect for style. Fruity, maybe needs cooler fermentation. Might do better as an ale. Slight bitter aftertaste. Very drinkable beer."

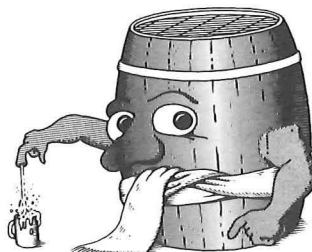
"Impressive head. Glorious color and clarity. Seemed a bit thin to me, but very close to style. Need to increase malt or decrease bittering hops slightly."

CONTINENTAL DARK

Second Place
N. Pablo Tognetti
St. Charles, Missouri
"St. Louis Dark"

Ingredients for 6 gallons

- 10 pounds Munich malt
- 1 1/3 pounds CaraPils malt



Illustrations by Martin Hess

- 1 pound 80°L crystal malt
- 1 pound raw barley
- 2 ounces Hallertauer hop pellets (120 minutes)
- 1 pinch Irish moss (last five minutes)
- Wyeast 2308 liquid yeast in one-quart starter

- Original specific gravity: 1.058
- Terminal specific gravity: not recorded
- Boiling time: 120 minutes
- Primary fermentation: two weeks at 42 degrees F (5.5 degrees C) in glass
- Secondary fermentation: four weeks at 30 to 33 degrees F (-1 to 0.5 degrees C) in glass
- Age when judged (since bottling): one month

Brewer's specifics

Two-step decoction mash. Dough-in at 100 to 105 degrees F (38 to 40.5 degrees C), hold one hour. Protein rest at 120 to 125 degrees F (49 to 51.5 degrees C) for 30 minutes, reached by infusing boiling water. Mash-in at 152 to 155 degrees F (66.5 to 68.5 degrees C) for two hours and 30 minutes. Mash-in temperature reached by boiling about 2/5 of the thickest part of the mash. Raw barley held 30 minutes at 130 degrees F (54.5 degrees C), then boiled and added to mash-in. Mash-out at 165 to 170 degrees F (74 to 76.5 degrees C) for 20 minutes. Mash-out temperature reached by boiling 2/5 of mash. Sparged for 1 1/2 hours with 185 degree F (85 degrees C) water, eight gallons collected. Boiled down to six gallons. Naturally carbonated.

Judges' comments

"Caramel malt aroma. Nice head, good color. Smooth and nicely balanced. Dry, astringent finish. Medium body, slightly low for category. Malty, clean beer, but slightly light for category."

"Good mouth feel, wonderful aftertaste. Nice balance between malt and hops. Dry to slightly astringent from dark malts. Fair malt flavor, light on hops."

"Light in color, use darker crystal malt. Good flavor, overcarbonated."

WHEAT BEER

Second Place
Ray Ballester
Sacramento,
California
"West Coast Wheat"
(American Wheat Beer)

Ingredients for 5 gallons

- 6.6 pounds Weizenbier malt extract (60 percent wheat, 40 percent barley)
- 1/4 ounce Northern Brewer hops (60 minutes)



- 1/3 ounce Nugget hops (30 minutes)
- 1/2 ounce Perle hops (dry hopped)
- Brewer's Choice Bavarian Wheat liquid yeast

- Original specific gravity: 1.036
- Terminal specific gravity: 1.008
- Boiling time: 60 minutes
- Primary fermentation: six days at 60 degrees F (15.5 degrees C) in glass
- Secondary fermentation: one month at 60 degrees F (15.5 degrees C) in glass
- Age when judged (since bottling): one month

Brewer's specifics

Naturally carbonated.

Judges' comments

"Nice aroma, some wheat. Very nice golden, clear appearance. Reminds me of a Millstream Wheat."

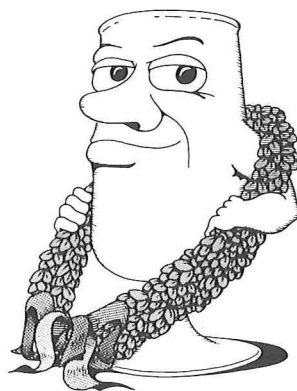
"Distinct clovelike aroma. Very nice, could be slightly fuller."

"Light body, but appropriate for style. Excellent brew overall. Could drink a gallon—maybe more!"

"Very light wheaty aroma with a solventlike background. Good color and clarity. Tight, creamy head—laces the side of the glass. Very clean and delicate with a light, wheaty taste. Extremely light and clean wheat beer—good effort!"

PILSENER

Second Place
Quentin Smith
Rohnert Park,
California
"Pilsener Urpwell"
(Continental Pilsener)



Ingredients for 6 gallons

- 10 pounds Klages malt
- 1/4 ounce Chinook hops (60 minutes)
- 3/4 ounce Saaz hops (60 minutes)
- 1 1/2 ounces Saaz hops (30 minutes)
- 3/4 ounces Saaz hops (finish)
- 1 teaspoon Irish moss 15 minutes into boil
- Wyeast Bohemian liquid yeast
- 1 1/4 cups corn sugar to prime

- Original specific gravity: 1.049
- Terminal specific gravity: 1.013
- Boiling time: 60 minutes
- Primary fermentation: eight days at 56 degrees F (13.5 degrees C) in glass

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- Secondary fermentation: 10 days at 56 degrees F (13.5 degrees C) in glass, then 20 days at 32 degrees F (0 degrees C) in glass.
- Age when judged (since bottling): one month

Brewer's specifics

Mashed 1 1/2 hours at 152 degrees F (66.5 degrees C).
Sparged with soft water at 170 degrees F (76.5 degrees C).

Judges' comments

"Citrus-grapefruit aroma. Hops barely perceptible, malt not perceptible. Good effort for a difficult style. Try some quality European hops in the secondary fermenter and increase malt for more body."

"There is too much dryness, you could up the malt. Could be a little more bitter. Floral aftertaste. Very tasty beer, though a little thin."

"Nice spicy hop aroma, nice head formation, color and clarity. Good body, nice mouth feel. Very good effort, I like it. Nice balance of malt—clean."

"A floral hop aroma—fresh and clean. Nice hops in flavor though very dry—needs more malt to balance. Astringency in aftertaste. A pleasant, drinkable beer, but too light and dry for style. A clean, well-made refreshing summer beer."

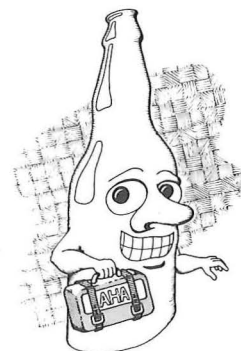
EXPORT

**Second Place
Donald Weaver
New Freedom,
Pennsylvania
"Orwig Export"**

Ingredients for 5 gallons

- 7 pounds pale malt
- 1 pound Munich malt
- 1 pound CaraPils malt
- 2 ounces wheat malt
- 1 ounce Tettnanger hops (60 minutes)
- 1 ounce Tettnanger hops (30 minutes)
- 1/3 ounce Hallertauer hops (30 minutes)
- 1/2 ounces homegrown Cascade hops (three minutes)
- 1/2 teaspoon calcium sulfate
- Brewers Choice Danish liquid lager yeast

- Original specific gravity: 1.052
- Terminal specific gravity: 1.015
- Boiling time: 60 minutes
- Primary fermentation: 14 days at 50 degrees F (10 degrees C) in glass
- Age when judged (since bottling): two months

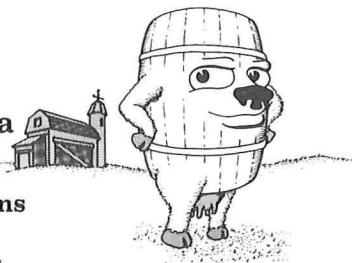


Brewer's specifics

Upward infusion mash. Mash-in all grains at 140 degrees F (60 degrees C) with 12 quarts of water. Protein rest for 30 minutes at 131 degrees F (55 degrees C). Starch conversion rest for 90 minutes at 148 degrees F (64.5 degrees C). Mash-out for five minutes at 170 degrees F (76.5 degrees C). Sparged with 5 gallons acidified water at 168 degrees F (75.5 degrees C).

CREAM ALE

Second Place
Murray Scott
Prince George,
British Columbia
"Ernie's Ale"



Ingredients for 6 gallons

- 9 1/2 pounds pale malt
- 1 1/8 pounds flaked rice
- 1 1/2 ounces Hallertauer hops
(75 minutes)
- 1/3 ounce Hallertauer hops (12 minutes)
- 1/3 ounce Hallertauer hops (two minutes)
- Wyeast German liquid ale yeast in 40 ounce starter
- 1 cup corn sugar to prime

- Original specific gravity: 1.052
- Terminal specific gravity: 1.014
- Boiling time: 75 minutes
- Primary fermentation: seven days at 60 degrees F (15.5 degrees C) in plastic
- Secondary fermentation: 31 days at 60 degrees F (15.5 degrees C) in plastic
- Age when judged (since bottling): one and one-half months

Brewer's specifics

Mashed using a mash-lauter tub with a recirculating, electronically controlled heater. Mash-in at 153 degrees F (67 degrees C), let drop to 151 degrees F (66 degrees C) and hold for one hour. Raised to 170 degrees F (76.5 degrees C) and sparged with 170 degree F (76.5 degrees C) water for 30 minutes.

Judges' comments

"Banana and bubble-gum flavor and body are a little too strong—but this is an interesting beer. A touch more hops needed. Very drinkable."

"Good color and clarity. Well balanced, nice aftertaste. Appropriate body. A very enjoyable brew!"

"Very pleasant, some people might like more hops. I liked it and could drink it very easily during summer."

"Slight sour-phenol aroma. Nice malt nose. Good balance for style, very slight oxidation, and could use a little more hops in the aftertaste. Just a little sour in the aftertaste. Excellent beer! A pinch more hops and less sourness would make it outstanding. Sourness is possibly from slight oxidation."



1990 BEST OF FEST CLUB COMPETITION WINNER

Tom Altenbach
Tracy, California
Representing the Draught Board
"Alt n' Bock Fest Beer"

Ingredients for 10 gallons

- 12 pounds pale malt
- 4 pounds toasted malt
- 4 pounds Munich malt
- 2 pounds dextrin malt
- 1 1/2 pounds light crystal malt
- 1 pound amber crystal malt
- 1 1/3 ounces Perle hops (60 minutes)
- 1/3 ounce Tettnanger hops (60 minutes)
- 2/3 ounce Perle hops (30 minutes)
- 1/6 ounce Tettnanger hops (30 minutes)
- 1/2 ounce Tettnanger hops (10 minutes)
- 3 ounces Tettnanger hops (end of boil)
- Wyeast Bavarian liquid lager yeast
- 1/3 cup corn sugar to prime

- Original specific gravity: 1.064
- Terminal specific gravity: 1.031
- Primary fermentation: nine days at 50 to 55 degrees F (10 to 13 degrees C) in glass
- Secondary fermentation: 23 days at 50 to 55 degrees F (10 to 13 degrees C) in glass
- Age when judged (since bottling): one month

Brewer's specifics

Toasted malt done in oven at 350 degrees F (177 degrees C) for 15 minutes. Mash-in at 140 degrees F (60 degrees C). Protein rest for 30 minutes at 130 degrees F (54.5 degrees C). Conversion rest for 90 minutes at 150 to 155 degrees F (65.5 to 68.5 degrees C). Sparge to collect 13 gallons. Boil for two hours.

Judges' comments

"Sweet with nice bitterness, clean finish, nice beer. Medium to full body. Really good, nice sweet maltiness with good balance. Nice n' tasty!"

"Looks like beer. Astringent-solvent fades, then slight citrus—all fades to malt and hops—walla! Very fruity—sweet to yum. Smooth, not much alcohol. I like this, but it is almost too rich. Nah, drink away!"

DEAR PROFESSOR

PROFESSOR SURFEIT

Let's Get Kinky

Dear Professor,

My partner and I were brewing a batch of Oktoberfest in my kitchen when I went into my backyard garden to scan for ripe honeydews. Said partner then goes out on my back porch and spots my newly arrived, comely female next-door neighbor and says, "Hi." She returns the greeting. Partner then says to me, "Let's try something new and innovative." My new neighbor, thinking she has been spoken to again, says "Say what?"!

Anyway, we have brewed several "specialty" beers with some success, but would really like to try something innovative, brewing-wise. I recently read a magazine article that referred to Bantu women in Africa brewing a quasi-commercial millet beer. We are planning an attempt at "Afro-Montanan Millet Beer." What, if anything, can you tell us about using millet as an adjunct, etc.? We've never seen anything in your publications about millet.

Thanks.

Sincerely,
Larry Grant (Homebrewer)
Sonny Butts (Innovator)
Miles City, Montana

Dear Larry and Sonny,

Boy oh boy, do I have some news for you. I just got hold of some weird yeast called *Schizosaccharomyces pombe* (*S. pombe* for short). I'm not kidding. This yeast is unique in the yeast world because it is the only yeast

that reproduces by fission, rather than budding. This means the yeast cell reproduces by dividing its body into two or more parts, each growing into its own entity. All other yeast reproduces by producing lots of buds that grow onto themselves.

Weird? You haven't heard nothing yet.

This yeast was cultured from African millet beer brewed in the bush. One of our club members here in Boulder, Colo., is a microbiologist for the biotechnology industry and cares about these kinds of things.

I got one gallon of Whoop Moffitt Schizo Pombe Beer in my basement right now a brewin'. Get in touch with Mr. Brewgenes himself if you want to get a culture: Robert Sclafani, Ph.D., Brewgenes Consulting Company, 9068 W. 95th Ave., Westminster, CO 80021.

Tell me what you brew. How about millet doppelbock called Innovator.

By the way, what did she say?

Looking to you in Big Beer Country,
The Professor, Hb.D.

Scotch Ales

Dear Professor,

I have developed a love for Scotch ales like McEwan's and Douglas. These beers are dark, very

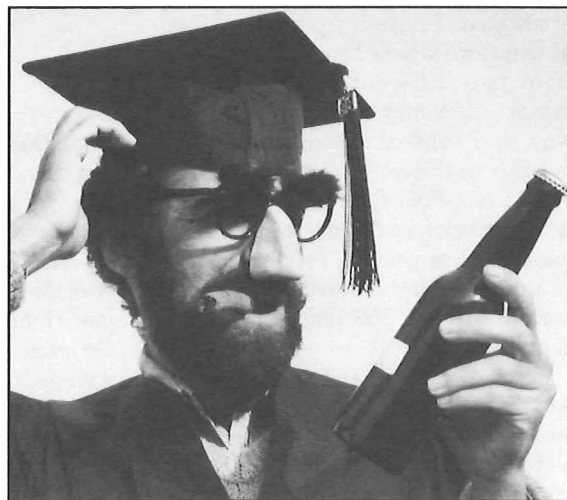
malty and very expensive. Maybe you have an all-grain or extract recipe for this type of ale. Help, Professor! I'm going broke in a hurry!

Stacy Tyler
Renton, Washington

Dear Stacy,

Your best bet is to look at the recipes in our book, *Winners Circle*. Other than that, buy a Scottish malt, use at least one pound of dark crystal for five gallons and go real easy on the hops. Five homebrew bitterness units will suffice. Malty and dark. For that extra touch, throw in a cup of crystal malt smoked on your barbecue with peat moss, of course (just make sure the peat isn't mixed with horse manure).

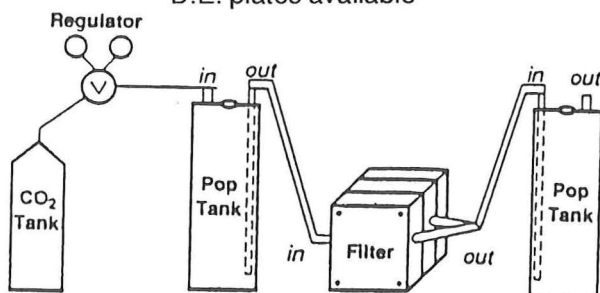
Bonnie beer,
The Professor, Hb.D.



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Dear Professor,

I've got a problem with my all-grain brews that I can't seem to solve. After mashing and sparging, I always calculate my extract efficiency and compare it with either Dave Line's published values in his *Big Book of Brewing*, or Dave Miller's in his *Complete Handbook of Brewing*. No matter what I do, my efficiency is always low compared to either of these references. For example, I typically get from 25 to 27 degrees of extract per pound of two-row lager malt compared to Miller's 35 and Line's 30.6.

Here's a brief outline of my procedure. I have my grains crushed at the store where I buy them. I buy from two different stores and my extract efficiency is the same either way, so I think crushing is probably not the problem. I mash with about one to one-fifth quarts of water per pound of grist, and I do a step infusion mash with a protein rest at around 125 degrees and a starch conversion rest at around 150 degrees F (65.5 degrees C).

I verify starch end point with an iodine test. I sparge using a two-bucket lautertun (no grain bag) with water at 168 to 170 degrees F (75.5 to 76.5 degrees C). My lautertun has

one-eighth-inch holes and a settling space of about three-eighths inch. I have tried underletting with no noticeable improvement. I get a pretty good sprinkler action with my sparging arrangement, and I distribute the water evenly over the grain bed. My sparge water is treated brewing water, sometimes containing gypsum and sometimes not (my local water is very soft). It usually takes me about 30 to 40 minutes to sparge for a five-gallon batch. Finally, I stir my wort before taking a gravity reading.

So what's wrong? I've noticed that many of the "Winners Circle" individuals also experience low extract efficiencies, so apparently a lot of us are doing something wrong. Any advice?

Thanks,

Dave Smith

Issaquah, Washington

Dear Dave,

Here's what might be the problem. If your water is high in bicarbonates or has a high pH (over 7.5 and especially in the eights) your efficiency goes down. If your malt isn't ground just right, your efficiency goes down. Do an experiment. Take one pound of your malt and do a fine grind mash and see what kind of extract efficiency you get. If efficiency is the same with your regular crush, then rule that factor out.

Are you taking your hydrometer reading at 60 degrees F (15.5 degrees C)? Ten or 20 degrees warmer makes a difference in your reading.

Six-row versus two-row will make some difference. Especially with Dave Line, who may have used plump English two-row.

Whatever you do don't worry. You never did tell me how your beer tasted.

Maybe nothing's wrong
if the beer is terrific.
The Professor, Hb.D.

Party Balls

Dear Professor,

In *zymurgy* Summer 1990, (Vol. 13 No. 2), a note on the use of party balls was entered asking about interest in their use. I have used several of these and they have worked well. The only problem is getting the metal cap off without wrecking the plastic party ball itself. Also, the liner inside the pasteboard has a tendency to leak water from the cooling ice cubes even when double-lined. I would be interested in seeing designs for making a tool for taking off the cap.

Yours truly,

Hylan Murphy

Yankton, South Dakota

Dear Hylan,

Rather than me trying to get technical, let me refer you to *zymurgy* Winter 1990, (Vol. 13 No. 5). There's a company that advertises information and hardware to convert party balls to fermenters and homebrew kegs. Check it out. Haven't used it myself.

Rolling in beer,

The Professor, Hb.D.

Oatmeal Stout for the Extract Brewer

Dear Professor,

I have just discovered Young's Oatmeal Stout. Do you think there might be a way an extract brewer could do something in this direction? Thanks.

Bob Barber

Chicago, Illinois

Dear Robert,

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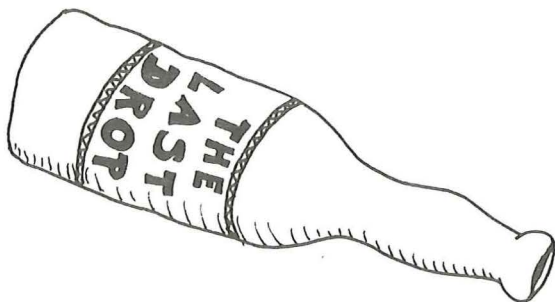
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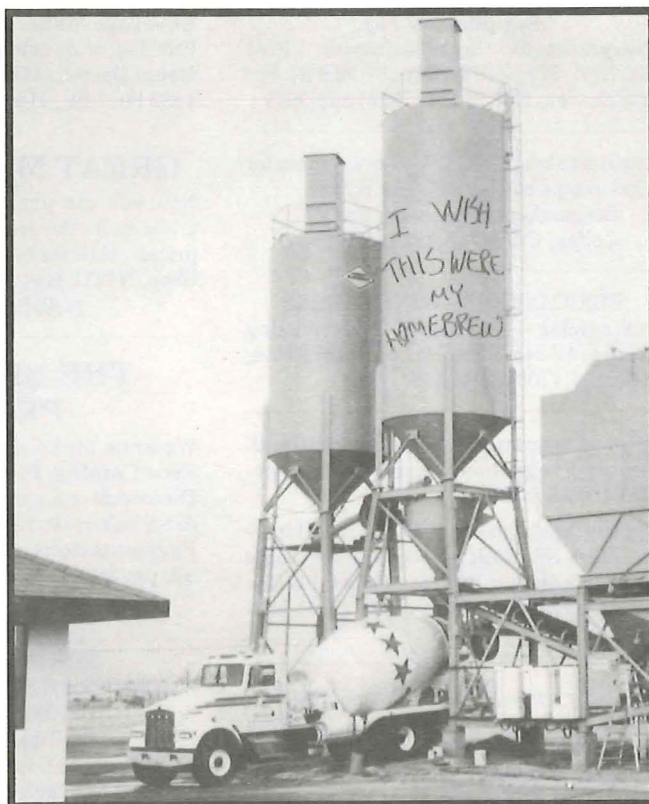


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HOMEBREW TERRORISTS?

This graffiti (right), on the outskirts of a midwestern city, was spotted by an alert homebrewer. (Editor's note: The AHA does not condone or encourage vandalism.)



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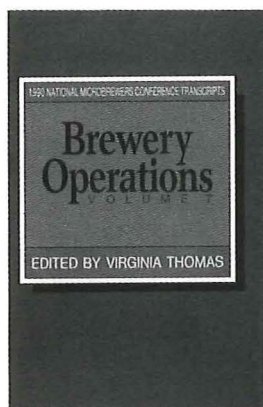
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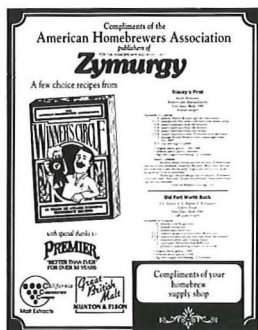
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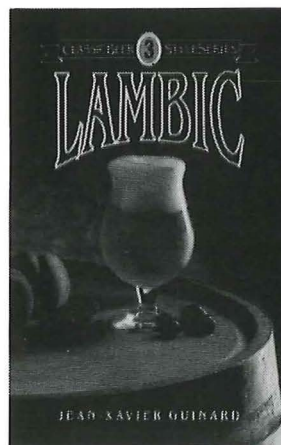
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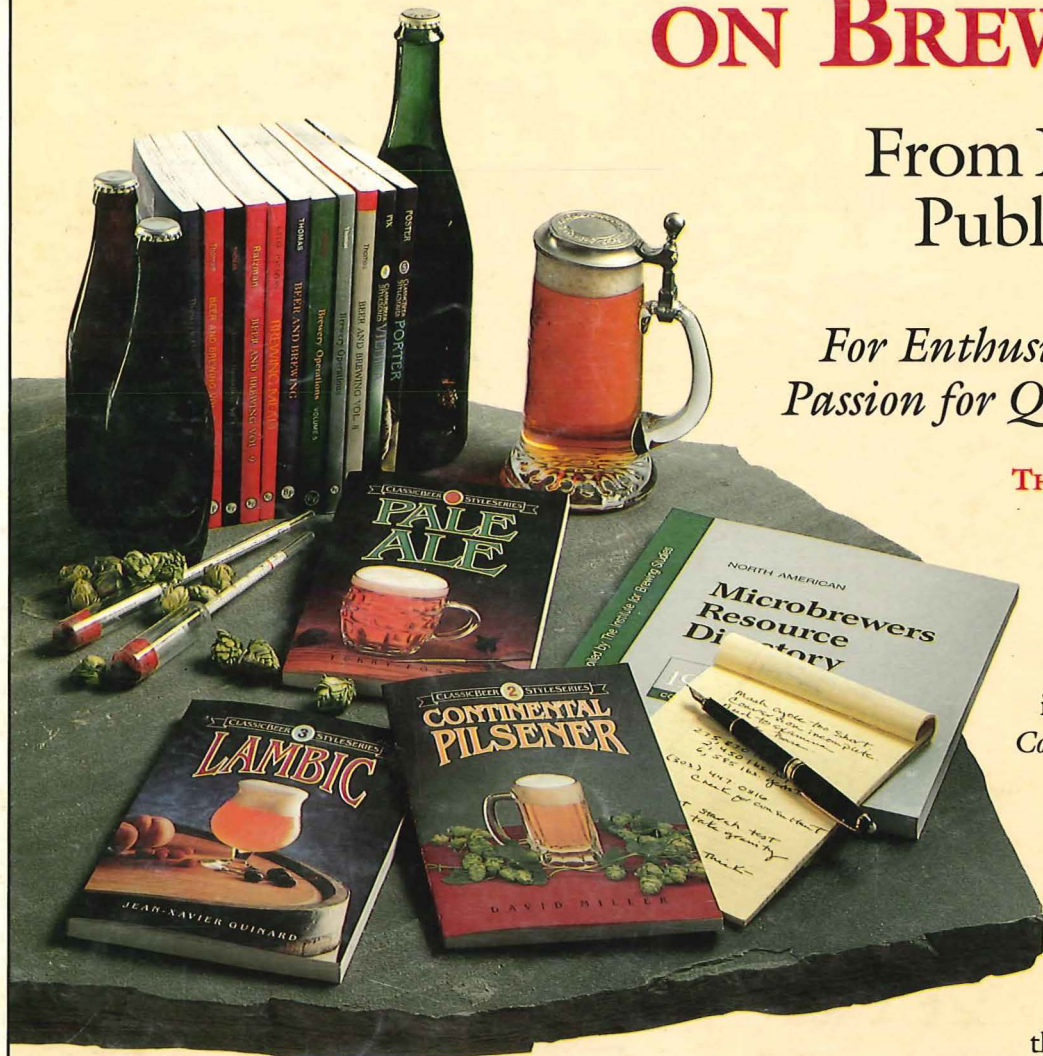
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Now about figuring a way for extract brewers to make it. If there were such a thing as oat syrup, I'd say use it, but I've never heard of the stuff.

So if you're a died-in-the-wool extract brewer, you might try combining six or seven pounds of diastatic malt extract with two gallons of water. Raise the temperature to 155 degrees F (68.5 degrees C). Then add one pound of quick oats (cut and rolled for oatmeal making), specialty grains (such as roast barley, roasted malt, crystal malt) and mash for one hour. Then strain the spent oats and grains out with a strainer. Carry on with brewing as you would normally from there.

It isn't very painful and will work.

Here's to Lockwood Avenue's first oatmeal stout,
The Professor, Hb.D.

An Ounce Is Not an Ounce

Dear Professor,

I haven't bugged you in years, but I guess it was inevitable that I would again. This question is actually after the fact but hoppily it came out well.

When using fresh undried hops, what would be your weight equivalents? Someone gave me some of undetermined bitterness. I thought I'd seen some information on how to use undried hops in a past issue of *zymurgy* so of course I procrastinated looking up the information until I was mashing. Being unable to find the information I decided to wing it and I threw the whole 5.5 ounces of undried hops in the batch (a moderately heavy, 1.054 OG porter) and an ounce of Chinook to boot. I'd rather err on the hoppy side than have an insipid beer, but for future reference and to decrease the unknowns, how many ounces of green hops does it take to get an ounce of dry hops? Should you use them green (undried)? They seem to have imparted a wonderful hop taste to the brew (and the dreams would make Carlos Castaneda jealous).

Just tryin' to maintain
a hoppy medium,
Don Smith
Caribou, Maine

Dear Don,

Hey old buddy, long time no hear.
Yeah we go way back. I was just

perusing a back issue this morning and was wondering whatever happened to ole Don Smith.

Anyway, freshly picked hops contain about 80 percent moisture. After they are dried they're down to about 8 percent. Now let's round off 8 percent to 10 percent and see that if you had 10 ounces of freshly picked hops, then 8 ounces would be water and 2 ounces would be just hop. So absolutely dry

hops would weigh in at 2 ounces. But remember they have 10 percent moisture. So if you figure 2.2 ounces at "dry" weight, then 2 ounces are just dry hop and .2 ounces are water. Looks like the ratio is about 5 to 1 to me.

Sounds like your after-the-fact beer will be just fine.

Not ten-four over
and never out good buddy,
The Professor, Hb.D.

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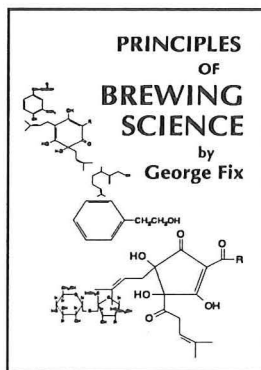
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REVIEWS

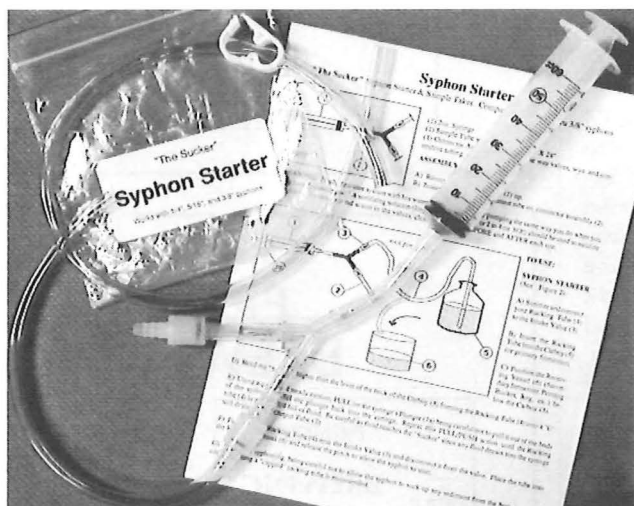
Take This, Sucker!

Taking gravity readings and starting siphons present similar problems. Tipping the carboy or lifting it onto a table for siphoning a sample are a hassle, and then there's the matter of actually starting the siphon. A water source that contains bacteria (like mine) makes filling the tube with water even worse than just sucking on the end to get the siphon going!

"The Sucker" is a sterile, efficient device for taking samples and starting siphons. Made by homebrewer Russ Wigglesworth in San Francisco, the gadget consists of a huge syringe, two one-way check valves, a "y" connector, a clamp and clear plastic tubing. The one-way valves allow the syringe to work like a pump and also eliminate any danger of contamination, as the only part of the Sucker that touches your beer is a single piece of hose.

To use it as a sample taker you simply sanitize the intake tube and stick it into the carboy. As you work the plunger of the syringe in and out, the liquid is sucked up the intake tube and pushed through the outlet tube into your hydrometer flask or tasting glass. The one-way valves keep your beer from going out the

intake tube. Be sure to hold the outlet tube in the flask instead of just setting it there—the syringe can develop lots of pressure if you pump fast and may cause the end of the tube to move on its own, as the blackberry mead stains on my ceiling attest.



To use it as a siphon starter, the intake of the Sucker is connected to the outlet end of your racking hose. As you work the plunger, air and water in the hose are expelled through the outlet of the Sucker. When beer reaches the syringe, the clamp is secured on the racking hose to prevent leakage, the Sucker is removed and the siphon starts to flow when the clamp is released. I've found the device especially useful when trying

to get a siphon going through a 40-foot copper wort chiller—normally quite a chore but very easy with the Sucker. Again, the only part of the gadget that needs to be sanitized for this procedure is the intake hose.

The only problem I ran into with my Sucker resulted from not following the instructions. After sampling a sticky barley wine, I waited until the next morning to rinse out the gadget. The one-way valves stuck closed, never to open again. The fault was completely mine, as the instructions specifically warn you to pump hot (not boiling) water through the device immediately after use. I've since obtained another Sucker, which I've heavily used according to the instructions for eight months without a hitch or stuck valve.

I highly recommend the Sucker to all homebrewers.

It makes taking gravity readings and starting siphons a snap. For me, that means I actually get my beer cellar work done when it should be, instead of putting it off until the day before the beer will be served!

For more information contact Russ Wigglesworth, PO Box 880601, San Francisco, CA 94188. He's available on CompuServe (ID 72300,61).

—Dan Fink

THE BEST FROM KITS

KURT DENKE

Over the last several years, the number of beer kits available on the homebrew store shelf has increased hugely. Although these kits provide a simple “user-friendly” introduction to brewing, it sometimes seems that beer kits suppress creative urges. Among many new brewers I have met, there seems to be an unspoken fear that if the magical beer-kit recipe is somehow tampered with, the beer gods will lash out angrily. As always, it is better to not worry.

When brewing from a kit, keep in mind that kits are just hopped malt extract—nothing more, nothing less. Anything that can be done with hopped malt extract can be done with a kit. If an apparition appears in the middle of the night before a brew and says “Don’t make Pilsener, make stout,” it’s perfectly all right to take that Pilsener kit, add a pound of roasted barley and some bittering hops, and brew away. Remember: this is your beer and you’re the boss. The kit manufacturer is just your assistant.

Most kits come with horrendous instructions, so a few modifications should just about always be made to that beastly recipe on the label. First, if the kit calls for sugar, substitute malt extract. There is no single, magical rate of substitution. Where the label calls for about two pounds of sugar, I normally substitute a can of

light plain malt extract, but you can use substantially more or less, or something else entirely and still get great results. Many brewers substitute light dry malt extract pound-for-pound in place of sugar. Experiment!

Second, boil the wort for at least 10 minutes regardless of what the instructions say. A longer boil has certain benefits, though for pale beers it’s often helpful to keep the boiling time low to minimize darkening of the wort.

Third, if you like hop aroma, add aroma hops. Kits are hopped, but contain only the bitterness of the hop and no nice herbal character.

What to do with the instructions that come with the kit? I like to ritually burn them while wearing lederhosen and chanting the Reinheitsgebot. Just be sure to hang garlic around the door to prevent the hideous things from coming back from the dead to haunt you, à la “Night of the Living Lousy Beer Instructions.”

Enough gab—here are some kits worth trying.

Munton & Fison Canadian Ale

Munton & Fison Canadian Ale kit comes in a 3.3-pound can with a packet of Muntona ale yeast on top. For five gallons I boiled the contents of the can and 2.5 pounds light plain dry malt extract with about a gallon of water for 10 minutes. After three days of fermentation I added one-half ounce of



Saaz leaf hops to the fermenter, and after seven days I bottled the batch, priming with three-fourths cup of corn sugar. The original gravity was 1.048 and the final gravity 1.014.

The color of the finished beer was deep gold—maybe just a shade dark for a Canadian ale, but very attractive. The rich color and excellent head retention made this a nice beer to look at. The body was quite light, and the hop bitterness was very gentle. The light, dry and easygoing character of this beer makes it an ideal beer for summer drinking or for sharing with friends who haven’t yet learned to appreciate stronger-tasting beer styles.

Edme Dark Beer

“Dark beer” isn’t the most descriptive name Edme could have chosen for this kit. Depending on who you’re talking to, “dark” can mean



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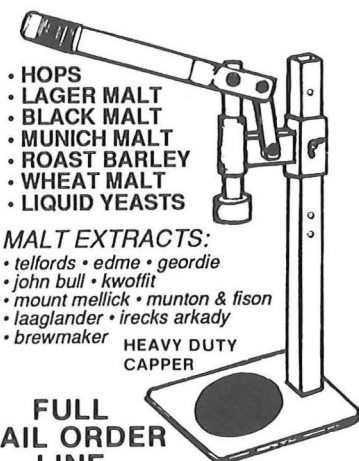
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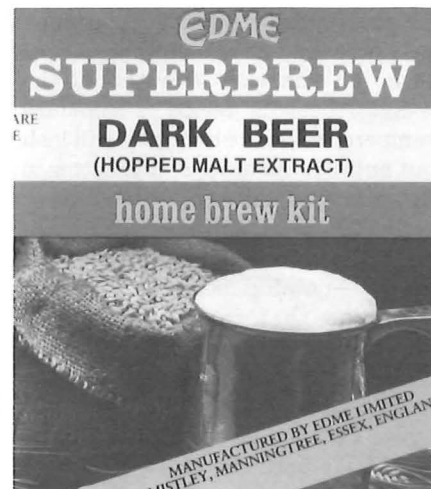
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anything from "not yellow" to "pitch black," and Edme doesn't really indicate on its labeling just what sort of beer this kit is meant to make. As I looked at the label, however, my mind drifted back to a wonderful evening I once spent in a Victorian pub in Yorkshire, where Samuel Smith's Mild Ale was served. I remember being impressed by the incredible head retention, the deep color and the mild but well-balanced flavor of this low-gravity beer. Since mild ale is virtually unknown in the United States, it's a natural for homebrewing.

With Sam Smith's Mild on my mind, I set out to make five gallons of a simple mild ale with the Edme Dark Beer kit. I mixed the 3.5 pounds in the can with 1.5 pounds light plain malt extract and one gallon of water, then boiled the wort for 15 minutes. After three days of fermentation, I added one-half ounce of Styrian Golding hops to the fermenter, and after seven days I bottled the batch with one-half cup corn sugar. The original gravity was 1.041 and the final gravity 1.010.

The finished beer was a light reddish-brown color and the head reten-



tion was excellent. The subdued level of carbonation from the low priming rate gave this beer the uniquely British drinkability that makes real ale so pleasant. The bitterness was rather low, the body was light-to-medium and both the malt and hops came through clearly in the aroma. Overall, it compared well with the various mild ales I've tried in Britain. This would make a fine quaffing beer for an evening of social drinking in a pub—and if I close my eyes, I can almost hear those Yorkshire accents.

WORLD OF WORTS

CHARLIE PAPAIZIAN

Vicarious Gueuze Lambic (à la sour mash)

Sour and twangy, Belgian-style lambic beers have intrigued homebrewers for years.

Yet their wild, indigenous and unique brewing techniques have eluded American brewers. And the real stuff gets harder to find as importers sweeten these beers for the American palate to bear little resemblance to the real thing. Here's a technique for making sour beer that really begins to resemble the lambic tradition.

My first sour mash beer was tasted in Kentucky in 1989. It offered much inspiration for experimentation and thoughts on how this technique could be applied to homebrewing to approximate some of the more unusual and sour beer styles of the world. Special thanks to Ray Spangler, Greg Noonan and Tracy Loysen for sour mash inspiration and guidance, and to Jean-Xavier Guinard for his wonderful book, *Lambic* (published by Brewers Publications), which I recommend to all brewers with so much as a passing interest in this uniquely wonderful style of beer.

Sour mash brewing is an unusual method resulting in beers that have varying degrees of sourness in their character. The sourness is a result of bacterial activity, but the end product is microbiologically stable. This means

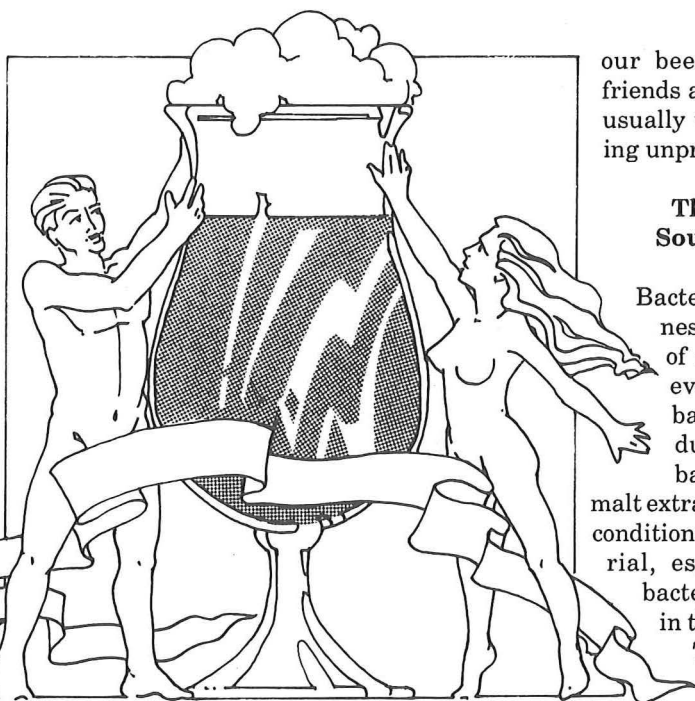


Illustration by Steve Lawing

there is a method by which one can achieve any degree of sourness in any type of beer and then stabilize that acidity in the end product.

Why would anyone want to make sour beer? For some, a certain amount of sourness in beer is attractive. For certain beer styles such as Belgian lambic, other Belgian ales, Berliner Weisse, Weizenbiere and even Guinness stout, acidity is part of the character. Achieving sourness in beer without the introduction of wild microorganisms to the fermentation has rarely been considered by the homebrewer. The problem with homebrew is that we never pasteurize

our beer, therefore our wild friends are not controllable and usually will run amok, producing unpredictable results.

The Principles of Sour Mash Brewing

Bacteria that produce sourness and increase acidity of mashes and worts are ever present on malted barley grain. By introducing crushed malted barley or sweet diluted malt extract to warm mashes, the conditions are optimal for bacterial, especially lactobacillus bacteria, activity resulting in the souring of the mash.

The degree of sourness can be controlled by temperature and time of activity.

After the souring activity is complete, the sweet and sour extract can be boiled with hops and the brewing process carried through to completion. The bacterial activity has been killed with boiling. The sourness remains, but further activity is stopped.

Cultured lager or ale yeast can be used to produce almost any style of beer with a "twang" of the sour mash. But even more interestingly, homebrewers who have access to unique Belgian ale yeasts, such as *Brettanomyces lambicus* or *Brettanomyces bruxellensis* can come pleasantly close to duplicating many of the characters

that make Belgian ales and lambics so unique.

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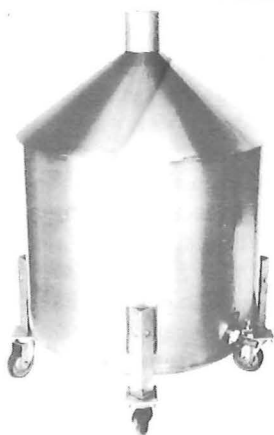
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aromas and flavors will resemble the pungency of a Belgian lambic.

Try a commercially available imported gueuze from Belgium or go there yourself and try this style before you brew it. Note the imported versions of Lindemann's lambic beers grow sweeter every year I try them and bear less resemblance to the more pungent nature of real lambic. It is not a style for every beer enthusiast, but for those who are hooked, it is liquid gold.

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

Ingredients for 5 gallons:

- 6 pounds light malt extract syrup
- 1/2 pound crushed pale malted barley
- 1/2 pound crystal malt
- 1/2 ounce stale old hops: 1 to 2 HBU
- 1 to 2 packages ale yeast or ale yeast culture and *Brettanomyces bruxellensis* yeast culture and *Brettanomyces lambicus* yeast culture
- 3/4 cup corn sugar (for bottling)

- OG: 1.042 to 1.046 (10.5 to 11.5)
- FG: 1.006 to 1.012 (1.5 to 3)

Add the crystal malt to 1 1/2 gallons of water and bring to a boil. Immediately remove the crystal malt from the boiling liquid. Turn off heat and add malt extract. Dissolve and stabilize temperature between 120 and 130 degrees F (49 to 54 degrees C). Gently pour this warm extract into a 4 or 5 gallon food-grade, odor-free plastic pail fitted with a lid. Add the crushed malted barley. Stir to mix.

Place a sheet of aluminum foil in contact with the surface of the liquid to form a complete barrier from the air. Fit lid snugly on the pail. Insulate the pail on all sides with a sleeping bag and/or blankets to help maintain warm temperatures and promote lactic bacterial activity and souring. The lactobacillus will sour the extract very dramatically and will be noticeable after about 15 hours.

Fifteen to 24 hours should be adequate for your first experiment with this process. The longer you wait, the more sour it will become.

When you open the container you may notice some mold growing on the surface. Don't worry. Skim it off and discard. The aluminum foil helped minimize the mold. You will definitely notice an absolutely abominable putrid odor that the bacteria has caused. Don't worry. It's supposed to smell awful. Almost awful enough to throw out. But don't!

After you have soured your sweet wort, add the hops and boil for 1 hour. Almost all of the foul-smelling aroma will be driven from the wort during boiling. Taste the wort. It will be sour, but fermentation and dilution with more water will lessen the sourness. Sparge and transfer to your fermenter and cold water. Add ale, *lambicus* and *bruxellensis* yeasts when temperatures are below 75 degrees F (24 degrees C).

Lambic-type yeast strains are difficult to store, but are becoming more available. Several homebrew clubs have them in their yeast banks. They may become commercially available if there is enough interest. If *Brettanomyces lambicus* and *Brettanomyces bruxellensis* yeasts are not available, ferment with available ale or lager yeast. You still can brew an extremely pleasant and refreshing sour mash beer.

If using the yeast strains of *lambicus* and *bruxellensis*, you will notice the surface of your fermentation will be covered with a white fuzzy skin. This is normal and a consequence of these wild yeasts. Belgian lambics are traditionally aged for over a year before bottling. Don't worry and go along the way your beer wishes to take you. Bottle when fermentation is complete and the mood strikes you as right.

For a variation of this recipe try adding cherries, blueberries, peaches, raspberries and other fruits of your fancy to resemble traditional fruit lambics.

(The preceding is an abbreviated version of a chapter from Charlie Papazian's forthcoming and fully indexed new edition of *The Complete Joy of Home Brewing* (Avon), scheduled for release in fall 1991.)



HOME BREW BITTERING UNITS

Homebrew Bittering Units are a measure of the total amount of bitterness in a given volume of beer. Bittering units can be easily 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 5-gallon batch, so it is important to note volumes whenever expressing bittering units.

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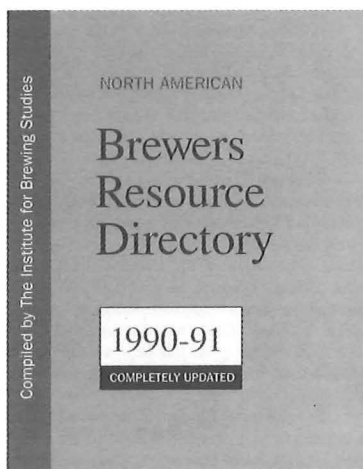
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HOMEBREW CLUBS

DAN FINK

Thanks to all who sent back their club registration and survey for 1991. If you haven't returned it yet, please do so right away so your free club subscription to *zymurgy* will continue uninterrupted. We appreciate feedback about what your club thinks the AHA should be doing, and we are planning an article on your suggestions to run soon.

One suggestion stressed over and over was for the AHA to get involved in lobbying for the legalization of homebrewing in those states where it is restricted. We are compiling a comprehensive list of the homebrew regulations in all states and hope to have this available soon. If you have any ideas about how we could lobby for legalization, please let us know.

Another frequent complaint we hear stems from the long lead time for *zymurgy* deadlines. Unfortunately, because all production is done in-house by our small staff on a laser printer, there's nothing we can do immediately to move back the deadlines, but we *will* keep trying.

You may have noticed the new byline for the Club News section. Dave Edgar is now working for the Institute for Brewing Studies at the Association of Brewers, and I've taken over his club duties for the AHA. If you need to reach Edgar, he still works out of our offices. I'm looking forward to working with all the clubs out there this year, and to meeting some of you at the AHA Conference, June 19 to 22 in Manchester, N.H.

If you have any questions, comments, kudos or gripes, please contact Dan Fink, Club News editor, at *zymurgy*, PO Box 287, Boulder, CO 80306-0287; (303) 447-0816; FAX (303) 447-2825.

ALASKA

Great Northern Brewers: During March, April and May, Alaskan brewers are heavy into production, so when summer rolls around they are not tied to their carboys and can instead enjoy fishing, camping and other fun things with a homebrew in hand. They are preparing for the Alaska State Fair competition. In March they'll present all of the club awards for the Fur Rendezvous Competition. If you're from Alaska, please enter—the club wants to expand their exhibit every year. Dues are \$20 per year, meetings the third Thursday of the month. Contact: Randy or Pat Oldenburg, 7601 E. 34th, Anchorage, AK 99504; (907) 276-6222.

CALIFORNIA

Draught Board: Congratulation to Tom Altenbach, who won both the Bock is Best and

Best of Fest club competitions in 1990, and also to Barry Marshall, Draught Board Brewer of the Year for the second year. The club will be assisting with the Alameda County Fair competition in early April. For more information contact Bob Jones at (415) 743-9519. The club is a geographically eclectic group of brewers, nominally centered in the East Bay, and invites all interested people to participate. Dues are \$1 per meeting and the newsletter is \$7 per year. Meetings are the second Saturday of the month at the Brewmaster in San Leandro. Contact: Harry Graham, 126 La Quebrada Way, San Jose, CA 95127; (408) 258-2792.

Inland Empire Brewers: The Las Vegas branch of the club has changed its name to "Nuclear Neon Brewers of Nevada." Both branches did well at the Riverside County farmer's fair. Richard Long, Alex Puchner, Howard Forshler, Sam Wammack, Sam Piper, John Oliver, Jeff Johnson, Doyle Frickey, Tom O'Leary and Paul Petitti all took awards. The club set up a display at the Murrieta Chamber of Commerce Oktoberfest and, as of Dec. 1, the club had 322 members in all but eight states. Dues are \$12 per year, meetings the first Thursday of the month. Contact: John Oliver, 1258 Lomita Road, San Bernardino, CA 92405; (714) 886-7110.

Redwood Coast Brewers: In the coming months RCB is planning all-grain brewing demonstrations, tasting evaluations for a variety of beer styles, study groups for aspiring beer judges and club parties. Dues are \$12 per year. Contact: Michael Byers, 707 Pelton Ave. No. 108, Santa Cruz, CA 95060; (408) 426-3005.

Shasta County Suds'ers and Valley Vintners: The Suds'ers joined with members of the Butte County Brew Crew and the Gold Coast Brewers Association for their annual Oktoberfest at the Woodson Bridge State Recreation Area near Corning, Calif. About 150 happy campers participated, and club beer mugs and sweatshirts were ordered. Dues are \$12 per year. Meetings are the second Saturday of the month at Goodtimes Pizza. Contact: Raymond Ault, PO Box 839, Anderson, CA 96007; (916) 347-5475.

Stanislaus Hoppy Cappers: The Hoppy Cappers are hosting the second annual Scotch Ale Competition this year, and last year's best-of-show beer also took best of show at the 1990 California State Fair. This year's competition, open to any California resident, will be AHA sanctioned. Deadline for entries is May 25. Judging will be June 1 at the 10th Annual Scottish Highland Games in Modesto, Calif. For more information contact the club. Dues are \$15

per year, meetings the third Thursday of the month at Barley and Wine. Contact: Wayne Baker, c/o Barley and Wine, 1907 Central Ave., Ceres, CA 95307; (209) 538-BREW.

Susanville Institute of Technology: Larry Anthony writes that he's speechless, but it's only temporary. Dues are \$2 per meeting on the third Thursday of the month. Contact: Larry Anthony, 527 Lakewood Way, Susanville, CA 96130; (916) 257-8803.

Yolo County Brew Club: "Come join us—we have members who raise hops, make extract beers, mash and anything else you can think of to do with homebrew," they write. April's beer is dark lager, May's beer is continental lager and June's is brown ale. Dues are \$12 per year per family, meetings the third Thursday of the month. Contact: Vern Wolff, Box 538, Esparto, CA 95627; (916) 787-3615.

COLORADO

Deep Wort Brew Club: The annual Christmas party was a smash with presents and door prizes donated by Colorado's newest brewpub, Judge Baldwin's in Colorado Springs. Richard Stearns took the trophy for the best Christmas ale of 1990 from a field of seven hearty, spicy brews. Onward and ever upward! Dues are \$15 per year, meetings the third Thursday of the month at members' homes. Contact: Bob Wood, 4515 Ranch Circle, Colorado Springs, CO 80918; (719) 531-6450.

CONNECTICUT

Underground Brewers of S.E. Connecticut: Due to unprecedented success, the Underground Brewers are burrowing back underground. Starting this year, they will schedule monthly meetings devoted to homebrew Q&A, tasting and fellowship. Emergency '911' meetings for rating purposes will be held by individual members. However, the Yankee Association of Homebrewers Against Organized Societies (YA-HOOS) decided on a February date for the Winnepauk Indian Pale Face and Ale competition. Chief Winnepauk may show up to judge, though he hasn't been seen since 1652. Meetings are the third Wednesday of each month at members' homes, dues are \$5 to \$10 a year. Contact: Paul Connolly, Box 105, Rowayton, CT 06853; (203) 854-9539.

DELAWARE

First State Brewers: A recent meeting featured a presentation by Master Beer Judge Rick Gleason. Other meetings centered on theme tastings, the first club competition, selection of

NEW CLUBS

COLORADO

The Mash Tongues: This new club has about 40 members. Meetings include a presentation on some aspect of brewing, followed by a beer tasting. Upcoming events include helping out with the Colorado Brewers' Festival this summer, as well as the 12th annual Augustfest competition. The club distributes a newsletter called the Mash Tongue Minutes. Meetings are the first Tuesday of the month at the Odell Brewery in Fort Collins, dues are \$10 per year. Contact: Glenn Colon-Bonet, 2453 Marquette St., Fort Collins, CO 80525; (303) 224-9469.

GEORGIA

Covert Hops Society: Georgia, one of the last bastions of Prohibition, finally has its own homebrew club. The club had its first meeting last June. There are no officers, but a rotating committee (better to spread the blame) guides the club. So far, most energy has been directed toward lobbying for the legalization of homebrewing in Georgia. Some members are studying for judge certification, and the first CHS competition is scheduled for spring. Dues are \$10 per year, meetings the third Tuesday of the month at the Ski Lodge Apartments clubhouse. Contact: Ken Dobson, M.D., 2340 Sanford Road, Decatur, GA, 30033-5529; (404) 634-5980.

MASSACHUSETTS

Boston Brew-Ins: The Brew-Ins have been busy recently. After a January pub crawl, they again got serious about brewing, sponsoring a yeast culturing workshop and a seminar on grain brewing techniques. Coming events include a regional micro and pubbrewery tour. Beers of the month are porters for April, Belgian ales for May and Pilseners for June. Dues are \$15 to \$20 per year, meetings are the second Wednesday of the month.

the best club IPA for Hail to Ale and a tasting of holiday homebrews. A question-and-answer column by club microbiologist Bruce Smith was added to the newsletter. Dues are \$15 per year per family, meetings are the third Wednesday of each month at Wine Hobby in Stanton. Contact: Charles Garbini, 705 Manfield Drive, Newark, DE 19713; (302) 368-3417.

DISTRICT OF COLUMBIA

Brewers United for Real Potables (BURP): Fall events included the annual campout hosted by the Hampton Roads club in Virginia, a fest beer contest and minitasting, and the annual Halloween "weird beer" competition, won this year by Tim Ness with his Pumpkin Pie Porter. BURP's first pub crawl was a tour of Baltimore pubs in November, and the annual Christmas banquet celebrated the return of member Bob Wright from Baghdad with a potluck dinner and holiday brews. Plans were crafted for BURP's gala 10th anniversary in 1991. Dues are \$15 to 20 per year, meetings are monthly. Contact: Erik Henchal, 7617 Dew Wood Drive, Derwood, MD 20855; (301) 869-0894.

ILLINOIS

Association of Bloomington-Normal (ABNORMAL) Brewers: The ABNORMAL brewers began the new year by starting a study

Contact: Jeff Pzena, c/o The Modern Brewer Co. Inc., 2304 Massachusetts Ave., Cambridge, MA 02140; (617) 868-5580.

MICHIGAN

Detroit Car Boys: On Dec. 11, four members of another club met to form the Car Boys. They are looking for people who are serious about brewing. Dues are \$5 per month or \$50 per year, meetings the first or second Wednesday of the month. Contact: Geoff Foster, 3777 Alvina, Warren, MI 48091; (313) 754-6709.

MINNESOTA

No Name Yet: This newly formed club has big plans, so contact them if you'd like to be a part of it. Dues are \$1 per month. Contact: Terry Sprung, 204 10th Ave. NE, Rochester, MN 55906; (507) 285-0591.



The Covert Hops Society

First row: John Smith, John Smith, John Smith, John Smith. Second row: John Smith, John Smith, John Smith, John Smith. Third row: John Smith, John Smith, John Smith, John Smith, John Smith, John Smith, John Smith. Fourth row: John Smith, John Smith, John Smith. Not Pictured: John Smith, John Smith, Jane Smith, John Smith, John Smith, John Smith

of beer styles. They will be looking at the definition of different styles, origins, recipes and, of course, some commercial and homebrewed examples. The November brew-in was a great success. They had the largest turnout of any club meeting and are already planning more, including an all-day all-grain mash-in. Congratulations to Tony McCauley for passing the BJCP exam. Future beer themes are Bock for April, Pilsener for May and Alt for June. Dues are \$12 per year. Contact: Tony McCauley, 404 Tilden Place, Normal, IL 61761-1432; (309) 452-1084.

Headhunters Brewing Club: The membership has continued to grow and the quality of the beers is excellent. Everyone had a great time at Laura Vanag's Headhunters New Year's Eve party. She has been a member since the club was founded. The club always welcomes new members and invites members of other clubs to drop by for meetings. Meetings are monthly at the Lil' Old Winemaking Shop. Contact: Greg Lawrence, 4S 245 Wiltshire Lane, Sugar Grove, IL 60554; (708) 557-2523.

Northwest Amateur Wine and Beer Makers Guild (NWA&BMG): In November 20 members visited the Brewmaster Pub in Kenosha and enjoyed a sampler of brews. In December the club was joined by the Northshore Wine Club and American Wine Society to sing

OHIO

DLB Homebrewers Club: The club's first meeting was in July and membership has been growing steadily. Members range from "first batch" beginners to all-grain brewers, some with more than eight years of experience. Everyone is welcome. A club newsletter was started in October. The November meeting included a tour of Melbourne's brewpub. Dues are \$5 per year, meetings the third Saturday of the month. Contact: Ron Lasher, 1050 Homeland Drive, Rocky River, OH 44116-2152; (216) 333-1649.

CANADA

Fairview Independent Zealous Zymurgists (FIZZ): The first meeting was held in November, when each member brought a best or worst beer for others to sample and evaluate. Much discussion took place regarding brewing methods and causes of problems. As the club is still in the formative stage, no dues were set. They hope to start a local homebrew competition. Meetings are monthly. Contact: Garth Hart, 10912-103 Ave., PO Box 2230, Fairview, Alberta, Canada, T0H1L0.

JAPAN

Foreign Fermentations: Members are awaiting shipments of grain from the States. In the meantime, they have plenty of beer in storage. The club continues to look for supplies in Japan, but the situation looks bleak. Any suggestions are welcome, and the club will take their chances with the law, being persecuted by the government in defense of their beliefs, they write. Membership continues to expand, and they are also making contacts among the Japanese. The club extends an invitation to any visitors. Contact: Crayne and Mary Horton, Kopo Hiro 105, Kugenuma Tachibana 1-15-5, Fujisawa, Japan, 251; Phone 0466-24-2806.

Christmas carols. April will feature lawn-mowing light lagers, May will have dandelion and rhubarb wines and June will feature fruit beers. Dues are \$1 per month for meetings on the third Tuesday of the month. Contact: Roy J. Horton, 1419 Redwood Drive, Mt. Prospect, IL 60056; (708) 439-4525.

Prairie Schooners: The Schooners continue to evolve as a club, asking the fundamental questions of clubhood: What do we want to be? What do we want to do? How can we become better brewers? Do we want to raise the dues? Can a socially oriented club with a non-competitive philosophy survive and prosper in these times? All those questions make the members thirsty, so they'll be featuring "The Beer Hunter" along with beers from each episode's region in upcoming meetings. Dues are \$12 per year and meetings on the second or third Tuesday of the month. Contact: Karl Menninger, RR1 Box 296, Petersburg, IL 62675; (217) 632-2995.

IOWA

Heartland Homebrew Club: Recent road trips have included a tour and tasting at Iowa's first brewpub, Fitzpatrick's in Iowa City, and the annual Fasching celebration at the August Schell brewery in New Ulm, Minn. Themes for upcoming spring and summer meetings include

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liquid yeast starters, hop teas, recipes for this
year's Iowa State Fair and another club batch for
a friendly heartland competition. Dues are \$12
per household, meetings are monthly. Contact:
Craig Olzenak, 1030 High St., Grinnell, IA 50112;
(515) 236-4033.

KANSAS

Hall of Foamers: Congratulations to John
Anschutz for placing third in pale ale at the
Bluebonnet. New officers are Ed Goldsmith,
president; Gary Lloyd, vice president; John
Anschutz, brewmaster; and Jeff Cowger, sec-
retary-treasurer. Meetings are the second
Wednesday of the month. Contact: Ed Gold-
smith, 849 NE 62nd St., Topeka, KS 66617; (916)
246-1893.

Rapscallions: The Oktoberfest was suc-
cessful, with lots of good homebrew entered in
the competition. Dale Rowh and Kevin Dixon
won best of show with their "Two Time Stout."
Dues are \$5 per year. Contact: Richard Seaton,
622 S. 167th. W., Goddard, KS 67052; (316) 794-
8058.

**Southeast Kansas Homebrewers Asso-
ciation:** Members report they have been turn-
ing out some pretty good all-grain beer with
cultured yeast. Their next project is finding an
inexpensive method for reliable temperature
control during fermentation. Meetings are
monthly. Contact: Ben Fox, 611 N. Mulberry,
Eureka, KS 67045; (315) 583-7256.

KENTUCKY

Lone Wolf Brewers: Contact Michael
Berheide, 120 Delwood Ave., Berea, KY 40403;
(606) 986-2647.

LOUISIANA

Redstick Brewmasters: The club has no
annual dues; the meeting times and places vary.
Contact: Charlie Milan, PO Box 17661, Baton
Rouge, LA 70893; (504) 343-2047.

MAINE

Maine Ale and Lager Tasters (MALT):
Several members plan to attend the AHA Na-
tional Conference being held right in the club's
backyard, and members will carpool down for
club night. MALT will make a 15-gallon batch to
share at the next meeting. Congratulations to
those Maltsters who recently passed the BJCP
test. Dues are \$10 per year, meetings the fourth
Monday of the month. Contact: Michael
LaCharite, 6 Madelyn Ave., Topsham, ME 04086;
(207) 729-0225.

MASSACHUSETTS

Barleyhoppers: The second annual
Barleyhoppers cider pressing took place in late
November with 20 members present. Everyone
chipped in to press more than 100 gallons of pure
sweet cider and took home at least five gallons
each. The December meeting featured a demon-
stration of bottling from a keg using a
counterpressure filler for some club entries in a
local AHA-sanctioned competition. Beers for
April are Continental light, Maibock for May
and weizen for June. Dues are \$10 per year;
meetings the first Wednesday of the month.
Contact: Mark F. Larrow, 154 King St.,
Northampton, MA 01060; (413) 586-0150.

Boston Wort Processors: The Worts held
club elections at the Oktoberfest meeting.
"Tapped" to serve were Jim Fitzgerald, presi-
dent; Jay Hersh, vice president; Mike Fertsch,
secretary; and Ron Vauruska, treasurer. Tom
Gorman and Chuck Cox will serve as members-
at-large. The Worts put on a strong showing at
the Western Northeast Regional competition.
The club won the interclub competition, besting

all other northeastern clubs by wining first places
in seven out of 12 categories. Individual winners
include Darryl Goss, first in porter and wheat;
Brett Peruzal, first in continental light; Bill
Murphy, first in continental dark, second in
American light, third in novelty beer; Jim
Fitzgerald, first in pale ale, second in brown ale,
and third in continental light; Mike Fertsch,
first in bock, second in continental dark; and
Steve Stroud, first in strong ale, third in
Oktoberfest, and third in pale ale. Congratula-
tions to all! Dues are \$12 to \$18 per year,
meetings the first Friday of each month. Contact:
Steve Stroud, 15 Dunbar Ave., Medford, MA
02155; (617) 395-6822.

MINNESOTA

Northern Ale Stars: Several members
have been working and brewing with a person
interested in commercial brewing. Several test
brews, including a full barrel of golden ale, have
been brewed. The club has acquired a 75-gallon
stainless-steel kettle and plans to produce large-
scale "community brews." A trip to the Twin
Cities took place in December when members
met with the Bosso brewers to tour two micros
and two brewpubs. Plans are being made to co-
sponsor the second annual International Beer
Tasting in Duluth. Dues are \$10 per year,
meetings every six weeks. Contact: Don Hoag,
5426 Beartrap Road, Saginaw, MN 55779; (218)
729-6302.

MONTANA

Zoo City Zymurgists: The club's annual
Oktoberfest Homebrew Competition was a big
success. Chuck Zadra and Thornton Burice
shared the best-of-show award. Skip Madsen
dominated the light and dark categories with
two first places and one second place. Tedd
Hess-Homier's Mastodon Tooth Stout was also
well-received, getting a second place. Several
new members were welcomed to the club and
thanks were given to the Missoula community
for help and a growing appreciation for
homebrew! Meeting themes are for April, yeast
culturing; for May, Pilsener; and for June, the
annual membership drive and Barbecue. Dues
are \$10 to \$15 per year, meetings the second
weekend of the month. Contact: Skip Madsen,
1240 S. 2nd W, Missoula, MT 59801; (406) 543-
6929.

NEVADA

Washoe Zephyr Zymurgists: The 1990
WZZ Oktoberfest was a great success, with many
"yards of lager" consumed. November was wine
month, when members tasted homemade wines
from Concord to Cabernet. Some potent holiday
ales took the edge off a chilly December, and the
club was looking forward to a chili cookoff in
January. Dues are \$10 per household per year,
meetings the second Friday of the month. Con-
tact: Eric McClary, 6185 Franktown Road,
Carson City, NV 89704; (702) 883-7187.

NEW JERSEY

**Mid-Atlantic Sudsers & Hoppers
(MASH):** The holiday meeting included a beer
tasting led by Ed Busch that involved club mem-
bers and interested outsiders. A get-well case of
beer was sent to an injured club member, being
more appropriate than a bouquet of flowers. The
club brewed over the holidays to prepare for Hail
to Ale, and has been "brewing up a storm" in
preparation for the National Conference in June.
Dues are \$12 per year. Contact: Ed Busch, PO
Box 105, Flagtown, NJ 08821; (908) 359-3235.

NEW YORK

**Broome County Fermenters Associa-
tion:** In October some members attended the

Canstatter Volksfest in Stuttgart and the Oktoberfest in Munich. Jerry Martin took best of show in the wine contest with his blackberry. Dave Hughes was elected president; Paul Houle, vice president; Brice Feal, secretary; and Tom Elliott, treasurer. Frank Haining's Alpirsbacher took best of show in the light beers contest, and the "Beer Hunter" videos were entertaining and educational. Dave Hughes' Hunny of a Lager was voted best of show at the amber beers contest in December. Dues are \$10 per year, meetings the second Tuesday of the month. Contact: Brice Feal, 2601 Grandview Place, Endicott, NY 13760; (607) 757-0634.

Hudson Valley Home Brewers: The trip to Catamount Brewery and the Mountain Brewers in Vermont was a great success. The lunch stop at Three Dollar Dewey's ale house in Brattleboro was the highlight of the excursion. They are planning a sanctioned competition in late March or early April. Dues are \$20 per year, meetings the first Wednesday of the month at the Verbank Village Inn. Contact: Bruce Franconi, RD2 Box 35, Red Hook, NY 12571; (914) 758-0661.

Long Island Brewers Association: (LI-BATION): Informality is the club's primary attribute. Mr. Fadeley's Deli generously supports the club, providing space for regular meetings. Dues are \$2 per year, meetings the second Tuesday of the month. Contact: Arnie Moodenbaugh, 247 Titmus Drive, Mastic, NY 11950; (516) 281-0152.

New York City Homebrewers Guild: Many changes have taken place recently. Keith Symonds replaced Garrett Oliver as president because Oliver accepted a position as assistant brewer at the Manhattan Brewing Co. Other new officers are Keith Cunningham, vice president; Dan Donohue, treasurer; Peter LaFrance, secretary; John Naegle, social chair; and Doug Dundas, newsletter editor. Kirby Shyer will be opening New York City's second brewpub, Zip City, in late winter. Jeff Silman will be the brewmaster. Dues are \$20 a year, meetings the first Monday and third Tuesday of the month. Contact: Keith Symonds, 46 Gold St. No.1, Greenwich, CT 06830; (203) 531-4628.

Upstate New York Homebrewers Association: Though an Ontario pub crawl was cancelled, it was replaced with a local pub crawl, guest speaker Murray Volks from M.eV Research, and different tastings. Also on tap are a brewers' banquet and an open competition in April. Glenn Vangraafeiland captured the last two minicontests, for which upcoming themes are brown ale, bock and Pilsener. And they say no one there brews bad beer! Dues are \$20 per year, meetings the second Wednesday of the month at McGinnity's Pub in Rochester. Contact: Turk Thomas, PO Box 23541, Rochester, NY 14629; (716) 637-9441.

NORTH CAROLINA

Triangle's Unabashed Homebrewers (TRUB): TRUB finished 1990 with the annual Christmas party at the retiring president's house. This followed the successful TRUB open competition in November at the Weeping Radish Restaurant and Brewery. Jeb Strumer swept all three awards in the mead category and Roman Davis took best of show with "Roman's Russian Imperial." The club wants to thank the Radish's Brewmaster David Hull for making the brewery available for the competition and monthly meetings, and to congratulate him on his award-winning Helles. The new president, Andy Kligerman, and vice president, Lucy Adams, will preside over the club for the 1991 "reign of terror." Dues are \$15 per year, meetings the second Tuesday of each month. Contact: L.H. Adams, 1409 Rosedale Ave., Durham, NC, 27516; (919) 493-0857.

OHIO

Bloatarian Brewing League: 1991 events for the League include regular meetings (some of which may last for days, during which members display and compare equipment), field trips possibly to England, Belgium and Germany, sponsoring a beer tasting for the attendees of the 1991 American Breweriana Association's meeting in Kentucky, club brew sessions (some of which will involve original gravities of over 1.050), and educational efforts to entice some acquaintances to try making beer with ingredients other than 100 percent rice and corn. The members appreciate the ongoing support of the Drawbridge Inn and Oldenburg Brewery! Dues are \$15 per year, meetings are monthly at the Drawbridge Inn, Ft. Mitchell, Ky. Contact: Larry D. Gray, 7012 Mt. Vernon Ave., Cincinnati, OH, 45227; (513) 271-2672.

OREGON

Cascade Brewers Society: September highlights included a tasting and tour at the High Street brewpub, and John Dryzac from Britain gave a lecture on CAMRA and the British pub system. The agenda was planned for the next four months and several ales were tasted. Dues are \$10 per year, meetings the second Monday of each month. Contact: Scott Weech, 26654 Pickens, Eugene, OR 97402; (503) 935-7074.

PENNSYLVANIA

Three Rivers Alliance of Serious Homebrewers (TRASH): Thanks go to Tom Straub of Straub Brewing for the excellent tour in October. This is perhaps the only brewery in the world that shuts down during deer hunting season. Straub still flows from the eternal tap in the brewhaus, and workers can still drink while they work. Congratulations to Greg Walz for winning ribbons at the St. Louis Brews competition. The picnic was in September this year to avoid bad weather in August. More than 50 people attended. The hit was Ralph Colaizzi's Purple Haze blueberry beer. The November meeting featured a mashing demonstration by Colaizzi and digital refrigerator temperature control unit demonstration by Walz. The December meeting featured 12 different holiday

beers. New officers are President Mark Benson; Vice President Tim Henegin; Secretary Greg Walz; Treasurer Kathy Benson. Contact: Greg Walz, 3327 Allendorf St., Pittsburgh, PA 15204; 412-331-5645.

SOUTH CAROLINA

Hopportunists of Clemson: Club activity has been idle for the past few months, but starting in January club member Brian Nummer



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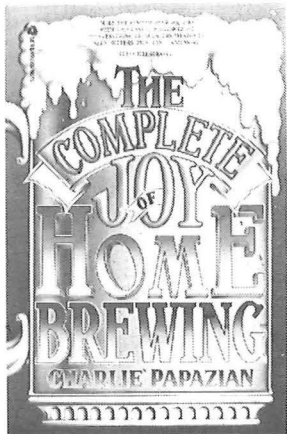
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taught yeast culturing. Fermenters are bubbling away for spring competitions. Dues are \$7.50 per year, meetings the last Sunday of the month. Contact: Brad Purinton, 597 Lakeside Drive, Six Mile, SC, 29682; (803) 868-2859.

TENNESSEE

Bluff City Brewers: The Bluff City Brewers are busy preparing for the Midtown in May homebrew extravaganza. The event will feature a sanctioned homebrew contest, a visit from Charlie Papazian, music and good times. Out of town participation is encouraged. Local homebrewer Phil Rahn continues to rack up national recognition. His bock won first place in the category at the 1990 Midsouth fair and went on

to take best of show. The bock also won its category in the Bluebonnet and the St. Louis Brews regional, where it took third place overall. Dues are \$20 per year, meetings the first Sunday of each month. Contact: Chuck Skyeck, 761 Beasley, Memphis, TN 38111; (901) 327-7191.

East Tennessee Brewers Guild: The Guild serves the serious and not-so-serious brewers of the Knoxville, Oak Ridge and Dixie Lee Junction metropolitan areas. Meetings are the first Tuesday following the first Monday of each month. The March meeting will be the traditional St. Patrick's Day stout competition. The annual light and amber beer competitions, a family event, will be in June. Dues are \$7 per year. Contact: Steve Railsback, RRI, Box 60A, Lenoir City, TN 37771; (615) 986-0526.

TEXAS

North Texas Homebrewers Association (NTHBA): Sincere thanks to all the homebrewers across the nation who supported the fifth annual Bluebonnet Brewoff. NTHBA is celebrating the club's sixth birthday on National Homebrew Day (May 4). Cheers, y'all! Dues are \$15 a year; meetings the second Tuesday of the month. Contact: Mike Leonard, Wine and Beer Magic, 13931 N. Central Expressway, Suite 320, Dallas, TX 75243; (214) 234-4411.

VERMONT

Green Mountain Mashers: Most recently the club chartered a bus and toured the breweries and pubs of Vermont, including Catamount, Otter Creek, Mountain Brewers and the Vermont Pub and Brewery. About 40 people attended the journey and found it to be a great educational experience. The trip also was an excellent way to raise money for the club coffers. The next trip will be to Montreal to tour a malt factory, the Molson brewery and the local brewpubs. Dues are \$10 per year, meetings the first Monday of the month. Contact: John Gallagher, 84 Caroline St., Burlington, VT 05401; (802) 862-6328.

VIRGINIA

James River Homebrewers: New! Improved! Sure, you've heard it before, but the James River Homebrewers really mean it! Interest in brewing in their area is at an all-time high, fueled by many new members, a turbo-charged newsletter and new meeting venues and club activities. In August, the local marketing representative for Maryland's Wild Goose Brewing paid a visit, samples and all. September found them joining BURP and HRB&TS at the Mashout/Brewfest '90 in Virginia Beach. The third annual Oktoberfest at Die Tolleyhaus was the largest and best ever, and by November growing membership forced the club to move to larger quarters at the Quarterdeck restaurant. Dues are \$12 a year prorated, and \$7 for the newsletter only. Meetings are the second Thursday of each month. Contact: Bob Barker, Minister of Propaganda, 4611 Forest Hill Ave., Richmond, VA 23225-3245; (804) 750-6828.

WASHINGTON

Brews Brothers: Alan Moen was elected president for 1991, and in his first "State of the Bros" address, PrezBro Moen urged a more active focus for the club, proposing a series of brewing seminars on technical topics, more field trips and Brews Brothers regional competition. ScribeBro John Polstra and BigBuxBro Dick Hurst were re-elected. Tom King announced the formation of the German Brewing Guild, dedicated to brewing and experimenting with traditional German styles, techniques and ingredients. Dues are \$12 per year, meetings the second Saturday of the month. Contact: John Polstra, 9346 California Drive SW, Seattle, WA 98136; (206) 932-6481.

WEST VIRGINIA

Maltainers: The Maltainers will have an entry in the Easter Seals Raft Regatta and plans include a whole bunch of RotoKegs. New beers will be featured in April, old beers in May and leftover beers in June. Dues are \$1.58 per quarter, meetings are the last Tuesday of the month at Maxwell's restaurant. Contact: Jim Plitt, 128 S. Walnut St., Morgantown, WV 26505; (304) 296-3530.

WISCONSIN

Bidal Society Homebrewers of Kenosha: The Oktoberfest dinner was held at the Landmark and included beer brewed by Dave Norton, Carl and Charlie Brown, Rick Solaraz, Bill Siel and Jim Jensen. Congratulations to Dave Norton

for best of show (extract) in the Dixie Cup, Bill Siel for second in the Best of Fest and Dave Norton and Rick Deering for third places at St. Louis. Final details have been set for the fifth annual Bidal Society competition April 20 and 21 at the Landmark. A new two-day format includes a brewfest with dinner and local micro and home beers. Categories have been expanded to 24 and entries should top last year's 192! Dues are \$36 per year, a trial membership is \$13 including T-shirt. Meetings are the third Thursday of each month. Contact: David Norton, Nort's Worts, 7625 Sheridan Blvd., Kenosha, WI 53140; (414) 654-2211.

The Brewtown Brewmasters: The November meeting featured a talk on brewing water by yeast guru Rob Burko. The December meeting was a Christmas party, including great Wisconsin cheese, sausage and Jim Stresing's antelope summer sausage. Dave Hummer's raspberry porter, Mark Meddaugh's blueberry mead and Bob Ford's barley wine ended up in three-way split, and John Gorecki broke up the party when he pulled out Mr. Microphone and started to sing carols and beer drinking songs. Contact: Mark May, 4280 N. 160th St., Brookfield, WI 53005; (414) 781-BREW.

Central Wisconsin Amateur Wine-makers Club: The club participates in many events such as judging, berry picking, outside speakers and visits to wineries and breweries. The main club goal is for the betterment of members' wine and beermaking skills. The April meeting will be about filters, and the May meeting will feature the club judging. Dues are \$10 per year, meetings the second Thursday of September through May. Contact: Edward R. Holt, 1200 E. 26th St., Marshfield, WI 54449; (715) 384-9441.

King Gambrinus Court of Brewers: Art Steinhoff went to the Dixie Cup in Houston and brought back some of the local beers for a club tasting. Some traveled well and some did not. There was some talk about club T-shirts, but they are waiting for a report from Paul Dixon before they decide. Dues are \$3 per month. Contact: Art Steinhoff, 7680 Big Pine Lane, Burlington, WI 53105; (414) 539-2736.

Madison Homebrewers and Tasters Guild: Dave Norton won best of show at the November Classic competition with his Promising Pilsener. Winners in the "This" category were Art Lies' November Classic, first; Dave Norton's Scottish Brown, second; and Art Lies' Hexamethyl Chicken Wire, third. In the "That" category, Jeff Leeder and Dale Osterlie took first with their Brother's Raspberry Brew, Dana Edgell took second with an American ale and Michael Howe took third with his Viking Virgin Wine. Their next competition is the Big and Huge on April 6. The entry fee is \$4, and entries will be divided by type (ale or lager) and gravity (Big=OG 1.052 to 1.062, Huge=OG >1.062). Send three bottles. Dues are \$10 per year, meetings are every Wednesday except the first of each month. Contact: Jan Blochwitz, PO Box 1365, Madison, WI 53701-1365; (608) 256-5364.

CANADA

The Brewnosers: On Oct. 4 the Brewnosers gathered for an Oktoberfest beer tasting. Over 20 beers were present for members' edification and enjoyment, from Venezuelan Polar Beer to Pils from Peru, and included many local beers. Taste bud burnout abounded, but what a party! Meetings are the first Monday of the month. Contact: Jeffrey Pinhey, 2325 Clifton St., Halifax, Nova Scotia, Canada, B3K4T9; (902) 425-5218.

Collingwood Brewing Club: At the October meeting, members tried their first all-dry-malt-extract beer, made by John Cannon. It was extremely good, and the club decided to purchase a bulk order of dry malt extract to be used as a

substitute for dextrose in kits. At the November meeting, Brian Brooks had members taste six different beers, brewed in different ways from Coopers Australian kits. There was quite a difference between the brews, some with extra hops, some without, and so on. Dues are \$5, meetings the fourth Wednesday of the month. Contact: Joanne Anderson, Box 3068, RR 3, Collingwood, Ontario, L9Y3Z2 Canada; (705) 445-1087.

Marquis De Suds: The club held its seventh annual competition in February in Calgary. Last year it attracted 181 entries. The April meeting will feature a club project tasting, May will be a hop evaluation in homebrew project and

June will be the annual homebrew barbecue. Dues are \$10 per year. Contact: Brad LeDrew, 232 Strathbury Bay SW, Calgary, Alberta, Canada, T3H1N4; (403) 240-3829.

Royal Canadian Malted Patrol: January featured an all-grain brewing demonstration by Chief Inspector Randall Powell. The meeting was at a genuine clandestine pub, though nobody was arrested. The February meeting will be at the Town of Shaftsbury Brewery, and will feature the awards ceremony for the competition. Dues are \$10 per year. Contact: Betty Ann Sather, Pacific Coast Vintners and Brewers, 3419 Kingsway, Vancouver, BC V5R5L3, Canada; (604) 433-8918.



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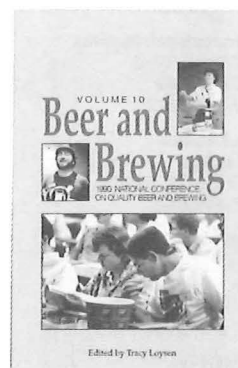
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Pacific Coast Vintners and
Brewers Ltd.
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Vancouver, BC V5R 5L3
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Deadlines: Spring—December 15, Summer—March 20,
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continued from page 61

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(Please note corrected price in this ad. *zymurgy* regrets our error in the Special 1990 issue.)

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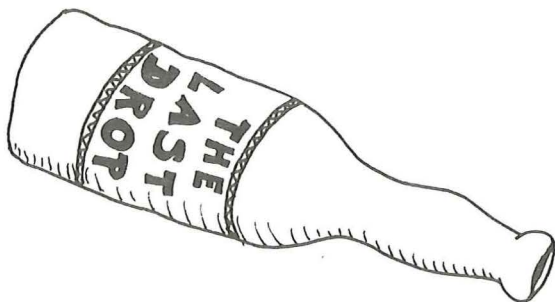
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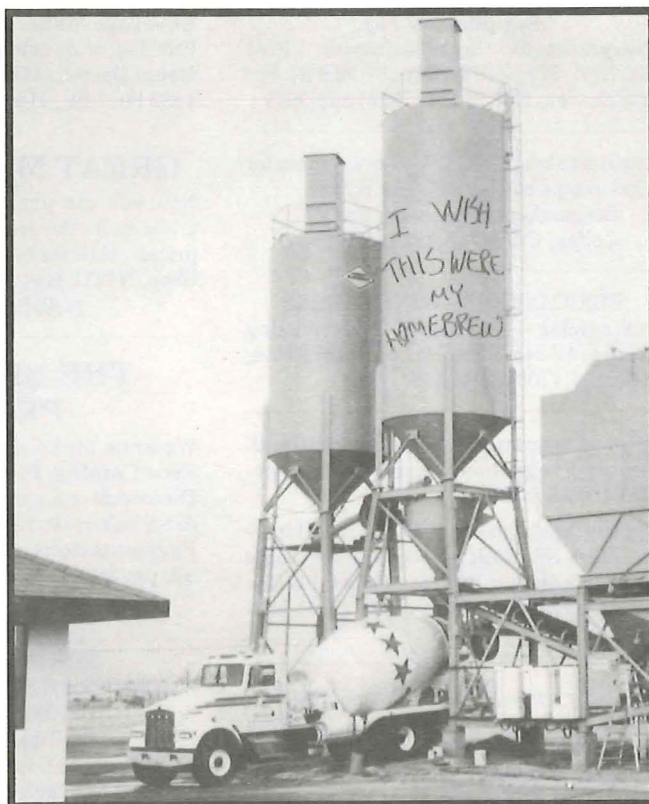


The Last Drop Logo Contest

- Design a logo! Send artwork entries for *zymurgy's* "The Last Drop" Headline Art Contest to: *zymurgy*, "The Last Drop", PO Box 287, Boulder, CO 80306-0287, USA. Deadline is June 3, 1991. Winner will receive a \$25 gift certificate, and entries become the property of *zymurgy* with credit to artists.

HOMEBREW TERRORISTS?

This graffiti (right), on the outskirts of a midwestern city, was spotted by an alert homebrewer. (Editor's note: The AHA does not condone or encourage vandalism.)



THE YEAST YEARS OF OUR LIVES

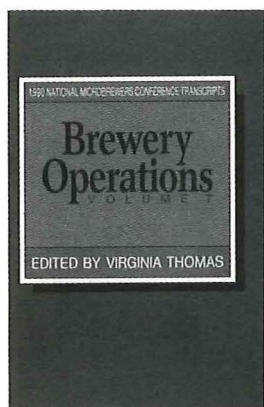
BY D.S. SANDHAUS

Beer Advertising Through The Ages

(THE ABBREVIATED VERSION)

<p>4278 B.C. THE "ROCK KEG" INVENTED!</p>	<p>JUNE 3, YEAR 7: CASK REPLACES ROCK AS PRIMARY FERMENTER!</p> <p>SUPPOSED TO BE A CASK</p>	<p>SOMETIME DURING THE 19TH CENTURY</p> <p>BOTTLED BEER IS MADE TO TASTE LIKE CASK BEER!</p> <p>19TH CENTURY BOTTLES</p>	<p>1989! (YEAH!!)</p> <p>CANNED BEER SAID TO APPROXIMATE TASTE OF BOTTLED BEER!</p> <p>CANS</p>	<p>WHAT'S NEXT?</p> <p>BEER PACKAGED IN THOSE LITTLE CARDBOARD BOXES WHICH ARE CURRENTLY USED ONLY FOR WATERY FRUIT DRINKS!</p>
<p>BIG AD OF 4278 B.C: "IF IT AINT FROM A ROCK, IT PROBABLY AIN'T BEER"*</p> <p>*PROBABLY TRANSLATED FROM THE EGYPTIAN.</p>	<p>BIG AD OF YEAR 7: "BEER THAT TASTES LIKE A ROCK, ONLY WOODIER"*</p> <p>*PROBABLY TRANSLATED FROM LATIN, I THINK.</p>	<p>BIG AD OF 1873: "TASTES EXACTLY THE SAME AS CASK-CONDITIONED BEER... ONLY DIFFERENT."*</p> <p>*PROBABLY TRANSLATED FROM ENGLISH.</p>	<p>BIG AD OF 1989: "TASTE THE TASTE OF BOTTLED BEER OUT OF A CAN!"</p>	<p>BIG AD OF THE FUTURE? "HMM... TASTES LIKE A ROCK."</p>

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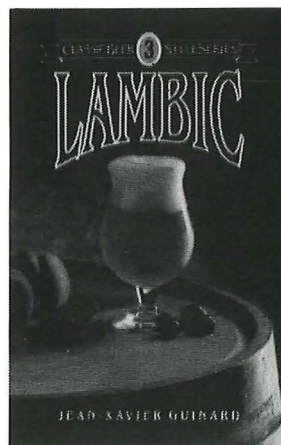
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