

FOR THE HOMEBREWER AND BEER LOVER *Zymurgy*

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Winter 1989

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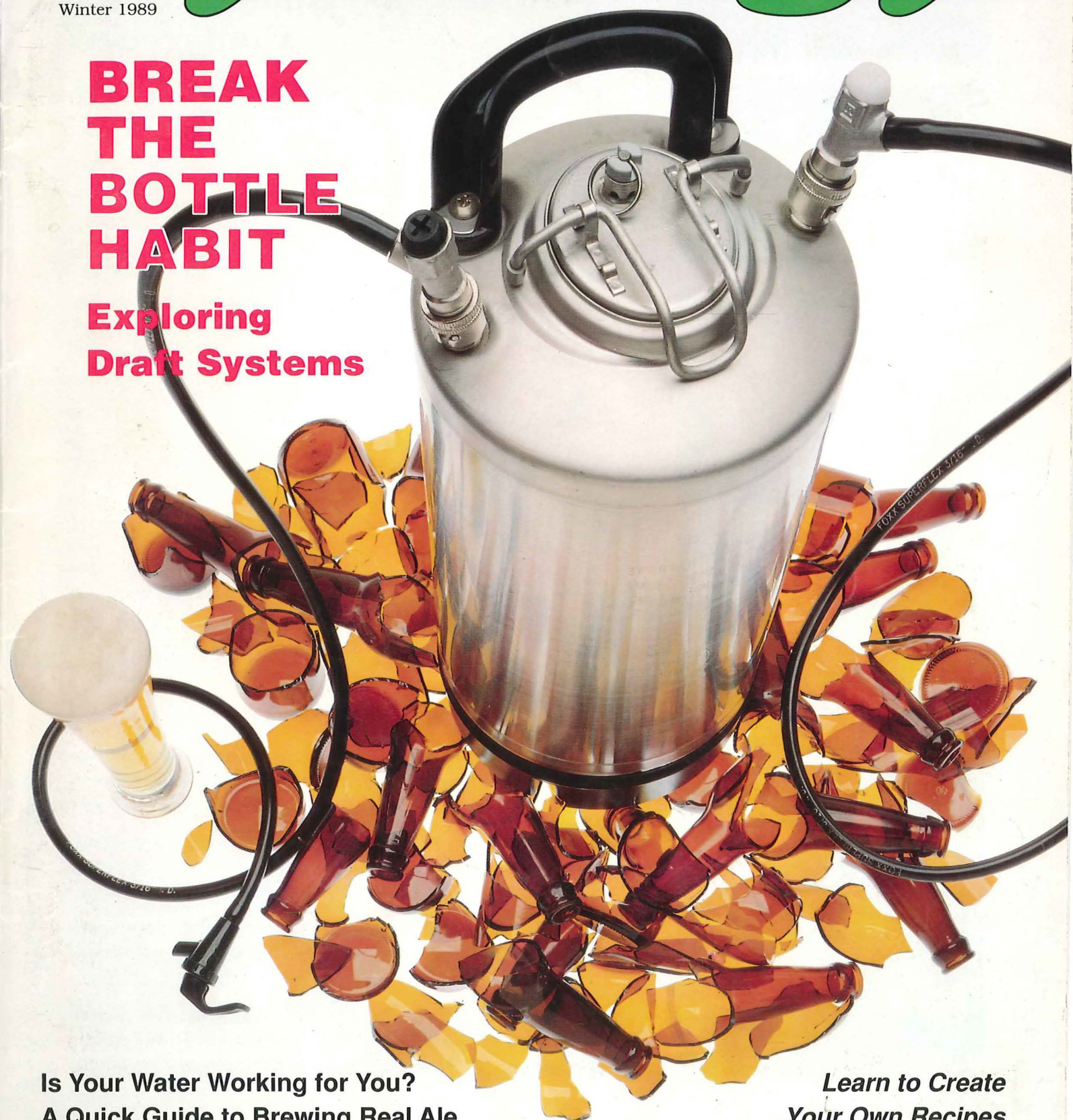
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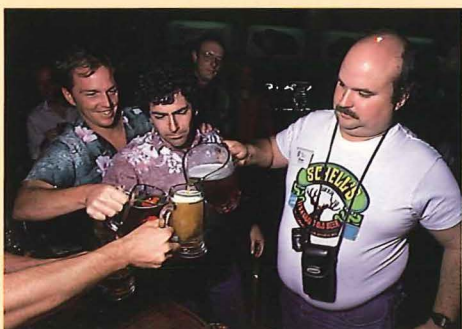
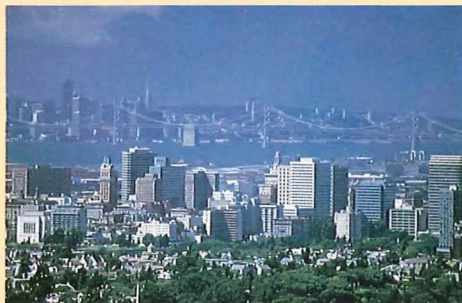
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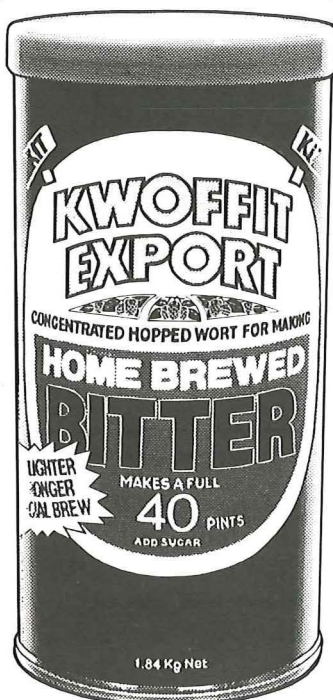
California Dreaming—Only homebrewers can stand this much fun. The AHA National Conference, June 13 to 16 at the Hyatt Regency Hotel, Oakland, California.

See *zymurgy*'s Spring issue for further details on the conference, the competition, hotel and airfare deals and more fun, or write or call now:

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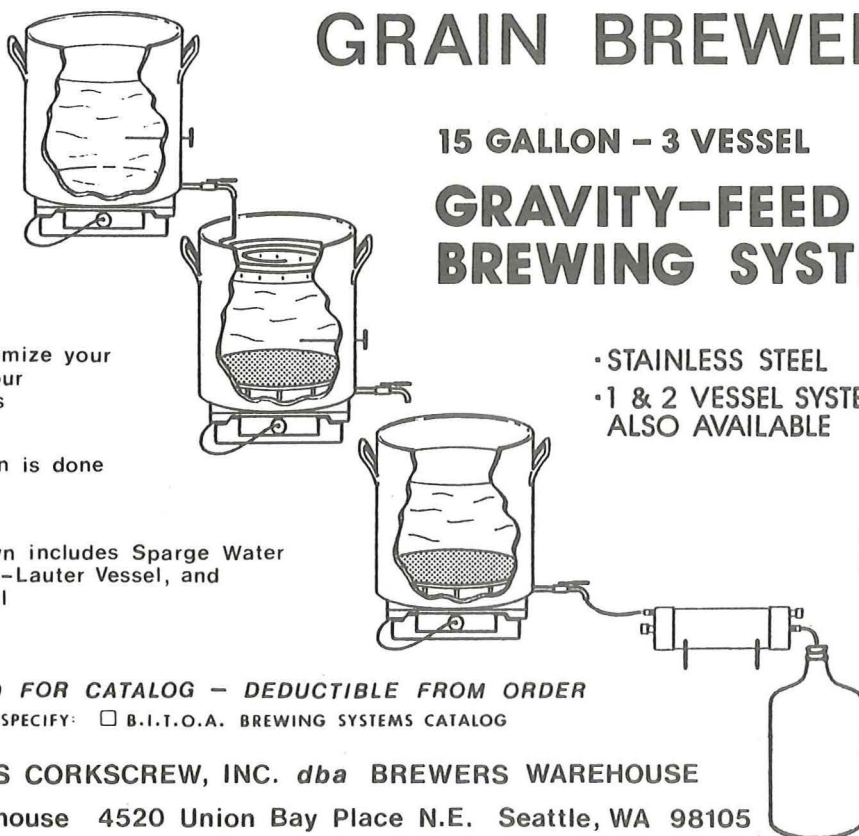
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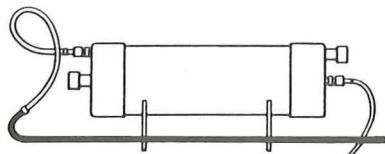
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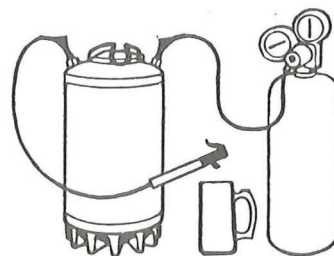
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Zymurgy

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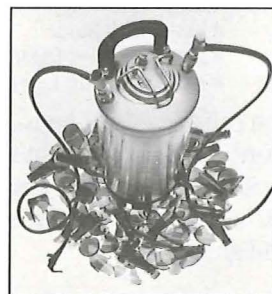
By Darryl Richman

What do these chemicals do for your beer?



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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 © 1989, 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

Here Come da Judge



he AHA needs you!

It has been more than a decade since *zymurgy* began, and we want the craft of homebrewing to continue to grow and improve. There was an incredible improvement in the quality of our homebrewed beers during the 1980s. There is room for still more improvement and the AHA needs you to help.

One of the best programs to help improve the craft of homebrewing is the National Beer Judge Certification Program (BJCP). Its stated purpose is "to recognize homebrewers and beer connoisseurs who have a thorough understanding of the brewing process, the flavor components in beer and the historical development of the different world beer styles."

Well, let me put my two cents in at this point. I've been observing the progress of this program since before the first examination was given in May 1985 and I believe an even more important purpose has evolved from the program. By developing standards against which an individual's expertise can be measured, the program has helped improve the quality of homebrewing in America. There's no doubt about it.

More than 400 individuals have taken great pride in their recognition, but the homebrewing community and you as an individual homebrewer have benefited even more. How? The program inspires learning about the qualities of beer and relating evaluation to the brewing, fermentation and packaging processes. I've seen this knowledge spread throughout the brewing community, both through competitions and one-on-one interaction between homebrewing judges and their homebrewing friends and/or fellow club members.

As we enter the 1990s we must recognize the importance of learning how to evaluate beer by using

our senses—the least expensive and the most sophisticated tool available to the brewer. Doing is learning and we want to encourage every homebrewer and beer enthusiast to take on the challenge of participating in the National Beer Judge Certification Program.

We need more qualified judges. We need to help others, beginners and veteran homebrewers alike, continue to improve the quality of their beers. If you have second thoughts about whether or not you should participate, then I advise you right now: Go to your stash of homebrew. Open a cool one, slowly pour it in your best glass. Sit down. Get comfortable and listen to your beer for words of encouragement.

The BJCP improves the quality of homebrewing as it improves the quality of judging and evaluation. It improves the quality of competitions. It promotes excellence in our craft. It helps us develop and understand standards that serve as guidelines. It helps us recognize our own taste prejudices and biases, regional and otherwise. It helps us to become more objective, and perhaps most important, it helps us to develop humility.

The program is astonishingly accessible to any beer enthusiast. Catch the spirit of the 1990s and be a part of a great community of brewers. It's quite simple: The American Homebrewers Association needs you because you can help improve the quality of beer.

The National Beer Judge Certification Program is jointly sponsored by the American Homebrewers Association and the Home Wine and Beer Trade Association. For more information write or call the BJCP Administrator, c/o AHA, PO Box 287, Boulder, CO, 80306-0287, (303) 447-0816.

DEAR ZYMURGY

OUR READERS

Pleasures at Any Speed

Dear *zymurgy*,

In Kihm Winship's review of *The New World Guide to Beer* (Fall 1989, Vol. 12, No. 3) he quotes Michael Jackson: "Drink, food and sex can all provide quick satisfaction or a more relaxed enjoyment. Some people take their pleasures quickly, and swear loyalty to the same beer every day, but they miss much. The search for a perfect pint should last a lifetime."

The second and third sentences in the context of drink are good advice, in the context of food they're equally sound, but I think Michael Jackson's advice, if transposed into the last context (sex), might well serve to anger a spouse or two. Care to qualify this, Michael?

Fortunately still single
and able to change contexts at will,

Jay A. Idense
Medford, Massachusetts

Dear Jay,

The transposition is yours, but thanks for extending my thought process. I can always use a little help. Surely, though, the search for perfect sex should last a lifetime? Whether it should always be with the same partner is a matter of personal choice. If in doubt, stay single. Further questions on this topic should be addressed to Dr. Ruth.

Michael Jackson

Mead Making in Scotland

Dear *zymurgy*,

While vacationing in Scotland last month I had the opportunity to visit the Traquair House, renowned for the exquisite House Ale brewed on the premises.

The Traquair House, the oldest inhabited home in all of Scotland, is also a public museum. Among the exhibits are several handwritten letters dealing in subjects ranging from royal family visits to payment for servants' services, dating back to the 17th and 18th centuries. While perusing the various documents, I came across something I thought might be of interest to the readers of *zymurgy*. The following is a recipe for Traquair Mead copied *verbatim*. Because it was handwritten, two words were undecipherable; where these appear there will be a blank space.

TRAQUAIR MEAD

Four pounds of honey to one gallon spring water. Two ounces of hops. One large handful of walnut leaves and stalks. Let the mead boil one full hour. _____ it well: A quarter of an hour is enough for the hops and



Mark Roebuck of Jefferson City, Mo., designed this homebrew label on a Macintosh computer for Karl Menniger of Petersburg, Ill.

leaves. This is sufficient for 12 gallons. Strain it off when milk warm. Spread yeast on a _____. Twenty-four hours to work in a wooden tub by the fire. If it should happen to cool, it must be heated to work brisk. Fill the vessel full and let stand two days. Before it is bunged closed: Spile it at 10 months' end. If it is agreeable to taste, bottle it.

Cheers,
Marty Nachel
Oak Lawn, Illinois

Sterilizing Solution Overkill

Dear *zymurgy*,

I enjoy every issue of *zymurgy*. Such diversity, such fun.

I have a problem with one article in the Fall 1989 (Vol. 12, No. 3) issue—"Bottling Time (For the Beginner)" by Jay Ankeney. He states on page 42 that a sterilizing solution is made up of three tablespoons liquid bleach per gallon of water(!?!). Unless the water in LA is *really* bad, that sounds like overkill! (I truly hope it was a misprint.)

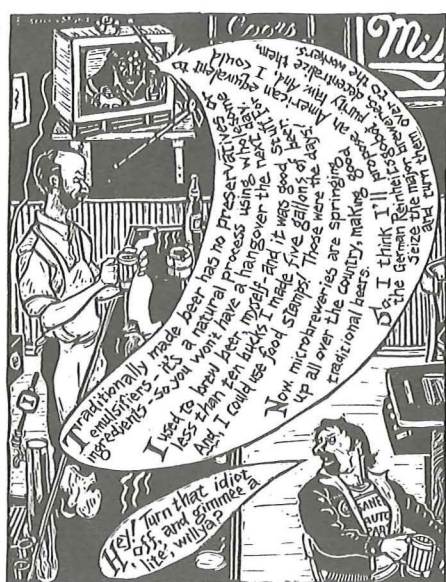
I have been using two ounces of bleach per five gallons of water as suggested in *The Complete Joy of Home Brewing* by Charlie Papazian and I have had thirty-five batches of wonderful beer. That is not luck or happen-chance.

Ah well, I guess that's the diversity I was talking about—plastic, glass or stainless-steel fermentation vessels; blowout or not; liquid versus dry yeast; whole grain or malt extract—whatever—as long as it's homebrew made the relaxing way!

Relaxed, not worrying,
Bob Schnick
Augusta, Georgia

PRESIDENT BILL/WILLIAM L. BROWN

PRESIDENT BILL
I was a fanatic on few subjects. The main exception was the subject of beer. I did tend to go on about it. But, then, it was a fascinating topic. Unfortunately, America was largely a beer-illiterate nation. It was my duty, therefore, to educate and to set an example. So I spoke to the nation. I told it that, as with many things, corporations and a big-and-bland-is-better mentality had subverted America's tastebuds. "Beer is like bread," I said. "There's the dark, hearty stuff from the local bakery, or there's the white, carcinogenic junk from the supermarket." ★



"President Bill," a comic which appears in a Washington, D. C. weekly, The City Paper. The cartoonist is Bill Brown of Tacoma Park, Md. Sent to us by Chris Stenton of Arlington, Va.

Dear Bob,

Three tablespoons per gallon really is more than necessary, but it does work and Jay is right. And you and I and Jay are all making great beers!

Editor

Join the Conspiracy!

Dear *zymurgy*,

When you're looking to do some good in the world, do this! Request a copy of Papazian, Burch, Jackson, Miller, or any other homebrewing how-to book that comes to mind at your local library. That will put the most good news in the new books stacks since Prohibition ended.

Keep requesting new books and suggest they be ordered.

B. Faith

Fillmore, California

P.S. Please run this letter at least once a year for the next five years. Thanks.

Brewing Southern-Style

Dear *zymurgy*,

Earlier this year I wrote the AHA concerning sanctions for the Mid-South Fair's Homemade Wine and Beer Competition. The listing in *zymurgy* already has brought us entries. We anticipated an increase in our entries from 75 last year to about 125 this year. However, it

looks like we may have more than 200 entries.

Interest in homebrewing really has been growing in the mid-South. When something exciting is going on we will let you know so you can make it down this way and try some beer brewed with Memphis' famous artesian water well.

Good Brewing,
Chuck Skypeck

Mid-South Malts/Memphis Brews
Memphis, Tennessee

Confessions of a Budding Beer-o-phile

Dear *zymurgy*,

It was a special wine-tasting. The French Trade Commissioner was leaving so we were having a special do with his favorite wine—eight vintages of Haut Brion, one of the five French first growths. It was at the Four Seasons Hotel. The tables of 10 were bedecked in white linen and tuxedoed waiters hovered. I wore an antique pink straw hat with dusty red roses complete with an eight-inch hat pin and a white summer dress. It was a special occasion.

The guest speaker had "one of the finest palates in Vancouver." He led us through the vintages in reverent tones. We were comparing and deciding "how great is great." One lacked depth, another was elegant and

subdued, another tight, hard and unyielding, another had a hollow middle, another was ripe, round and had good structure. We swirled and sniffed, sipped and savored.

Two and a half hours later it was over. I did a little obligatory socializing and slipped from the room—down the stairs and into the Garden Lounge.

"Yes, madam, what will you have?"

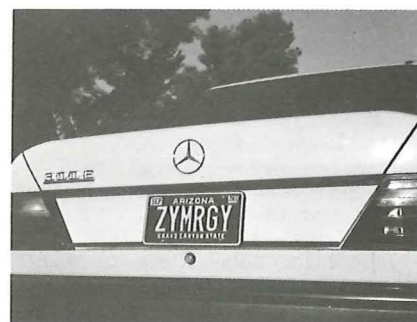
"A beer, please," I responded.

"What kind?" he asked.

"A Molson's Canadian," I said.

I know, a simple beer. I snickered as I quaffed it. It was perfect and a relief.

Betty Ann Sather
Vancouver, Canada



Sylvester Arena of Pheonix, Ariz., finally got around to sending in this photo—after two years and 25,000 miles.

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Colorado Springs, Colo.
Carter Stein — Portland, Ore.
Lat Stevens — Falls Church, Va.
Jim Stockton — Home Fermenter
Center, Eugene, Ore.
Carol Thiel — Bonito Brewing, Chula
Vista, Calif.
Gillian Toll — Hop Stop, Gloucester,
Ontario, Canada
Jay Trier — Washington, Iowa
Conrad Turgeon — Sanford, Maine
Paul Veselack — Normal, Ill.
Jeffrey Waalkes — Milwaukee, Wis.
Peter Wilson — Chesapeake, Va.

ASSOCIATION NEWS

New Board of Advisers

Ed Busch of Somerville, N.J., and John Sterling of St. Louis, Mo., have been appointed recently to the AHA's Board of Advisers. Ed has been homebrewing for a number of years and was the founder of MASH (Mid-Atlantic Sudsers and Hoppers). He has been to several AHA conferences, is a member of the Master Brewers Association of the Americas and works for the Filtration Products division of Manville. John was the founding president of the St. Louis Brews Club and has been an active member of the AHA for several years. By profession he is a strategic planner and does marketing research for Purina.

They will join 11 other advisers in representing the interests of the AHA membership. Recent projects before the Board have been the AHA Sanctioned Competition Program and the 1990 National Competition.

Sanctioned Competition Program Updated

The SCP is being revised constantly to facilitate better competitions that offer the most benefits, not only to the organizers but also to the contestants and judges. We receive comments from organizers and discuss proposed changes with the AHA Board of Advisers.

The AHA recently has revised its Sanctioned Competition Program, offering specific guidelines and suggestions for storage of entries,

staffing, bottles, judging, scoring and serving, as well as standards for awarding prizes and combining beer categories.

Information about the AHA's program is available upon request. Competition organizers are reminded that applications must be received a minimum of two months prior to the competition.

1990 AHA Conference—California Dreaming

The AHA's National Conference will be held in America's "bosom of beer"—the San Francisco Bay Area. Nowhere in the United States are there more breweries and brewpubs concentrated in such a small area. June 13 through 16, 1990, more homebrewers will be concentrated in this area than anywhere in the world.

There's no way to tell exactly what will happen, given such a fortunate combination of ingredients, but we're sure that there will be lots to learn and much to enjoy.

The annual homebrew club night is a sure bet, along with the second annual zymurgic music festival, lots of homebrew, a homebrew exposition of ingredients, supplies, equipment and other beer-related products, world-famous beer personalities, brewery visits, national competition judging, a gala awards banquet and a whole lot more to tickle your ribs, palates and inquisitiveness.

Complete program and registration information will be available in

the Spring 1990 issue of *zymurgy*, due out in mid-March.

Be there or be square.

National Homebrew Competition Twelve Years of Judging

"We'll make it even better in 1990," proclaimed National Judge Director Dave Welker after the successful conclusion and post-competition assessment of the 1989 competition. A veteran homebrewer and Nationally Certified Judge, Dave will continue to direct the judging of the competitions into the new decade.

The AHA will continue with last year's format of requiring entrants to send only one bottle of beer to be judged during first-round judging in Boulder, Colo. This will take place during the months of April and May, with final-round judging taking place in Oakland, Calif., on June 13.

In order to improve the quality of first-round judging, a special opportunity is being offered for out-of-town participants in the National Beer Judge Certification Program to participate in a week-long beer-judging session and training seminar in mid-May. All BJCP participants will be notified about this opportunity in March.

Rules and regulations will remain essentially the same as last year. Contestants will be encouraged (but not required) to use 12-ounce, brown, long-neck beer bottles for maximum protection from light and

breakage. The rules will emphasize that no bottles with raised glass designs, embossing or silk screening will be eligible for entry.

The "Wheat Beer German Style" class has been renamed "Wheat Beer" and will accommodate an additional subcategory for American Wheat Beer.

Complete rules and regulations will be available beginning Dec. 1, 1989. Send a self-addressed, stamped envelope with 45 cents postage to the AHA.

See inside back cover for details.

National Beer Judge Certification Program

The BJCP, co-sponsored by the AHA and the Home Wine and Beer Trade Association, continues to grow, and now has more than 359 active participants.

A special opportunity will be offered to all certified, recognized and national judges to participate in a judging seminar, first-round judging

and festivities in Boulder, Colo., in mid-May. Details of this program will be sent to all BJCP program participants in March.

Computer Beer Forum Gains Momentum

The AHA-administered beer forum on the CompuServe Information Service network continues to offer a way for brewers to communicate worldwide. Dan Fink, homebrewer and AHA staffer, has begun to administer the beer forum as an Assistant System Operator.

Live beer tastings, brew-ins and general discussion about all aspects of beer and brewing are featured as a service to AHA members. For a free starter kit and more information contact the AHA.

On-Line Beer Tasting Jan. 30, 1990

A live, on-line beer tasting will be conducted on the CompuServe

network beer forum. The following Belgian beers will be tasted: Lindeman's Kriek (second choice is Liefman's Kriek), Chimay White, Chimay Red, Hoegaarden Grand Cru, Duvel and Orval.

Participants are encouraged to share these beers with at least one other person during the tasting, as many come in large bottles or are high in alcohol. This opportunity to discuss the flavors of beer is open to everyone who subscribes to the network. The discussion will be led by Charlie Papazian and will begin at 7:30 p.m. Mountain Standard Time.

For more information contact Dan Fink at the AHA office, (303) 447-0816.

Clubs Renew Registration with AHA

In order to maintain accurate and up-to-date files on all active homebrew clubs in North America, Australia and New Zealand, the AHA has sent renewal forms for clubs

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to register with the AHA. Registration qualifies members to enter club competitions and receive a complimentary copy of *zymurgy* as well as Association information. If your club has not registered and you wish to do so contact David Edgar at the AHA.

New Staff Members

Denise Coté has joined the Association of Brewers staff as production director. Previously Denise was an editor for the University of Alaska in Anchorage. As of this printing, her first batch of mead, "Honey, Let It Be Mead," is fermenting. Monica Favre, former production director for the Association of Brewers, has moved to the Sacramento, Calif., area to pursue other career and homebrew interests. Monica and Tracy Loysen (former *zymurgy* associate editor) are co-authors of our latest For the Beginner series (see page 33). We wish Monica fine homebrews and the best of life and welcome Denise as director of all Association-related print production.

New Beginner Info Package Offered

The AHA has selected information from the past four years that is especially helpful to beginning homebrewers and compiled it in a 12-page package. Included are reprints from *zymurgy* about beginning brewing, bottling, recipe formulation, plus hop and malt charts. The package is available to members for a \$2 handling and copying charge (\$5 for nonmembers). See order form at right.

On the Road

While AHA President Charlie Papazian was in Philadelphia attending the National Convention of the Masterbrewers Association of America, Sept. 17 - 20, he stopped by Home Sweet Homebrew to talk and taste beer with local homebrewers. Charlie also traveled to Houston, Texas on Oct. 14 and 15 to participate in the annual Dixie Cup activities.

FREE FROM THE AHA!

How-tos

- ☐ How to Teach a Homebrew Class
- ☐ How to Start a Homebrew Club
- ☐ Editorial and Photo Guidelines for submissions to *zymurgy*
- ☐ Outline for Intermediate Brewing

Lists

- ☐ Additives allowed in beers commercially brewed in the U.S.
- ☐ Wholesale distributors for those retailing homebrew supplies
- ☐ Homebrew clubs in Canada, New Zealand, Australia and the U.S.
- ☐ Beer-related magazines, newspapers, journals, newsletters
- ☐ Micros and brewpubs in the United States with city and state

Especially for the Beginner

- ☐ How to Brew Your First Batch of Beer
- ☐ How to Use Specialty Malts, with Malt Extract Conversions
- ☐ The Zymurgist's Guide to Hops

General Information

- ☐ An Introduction to the American Homebrewers Association
- ☐ *zymurgy* Mini-Index 1978-1988
- ☐ The New Brewer magazine Index 1983-1988
- ☐ The Beer Lover's Store
A catalog of beer books, T-shirts, glassware and fun things.
- ☐ Introductory CompuServe Information Service kit (members only)
Includes free subscription and \$15 worth of time on the AHA's beer forums.
- ☐ Application and information for the AHA's Sanctioned Competition Program

HERE'S HOW TO OBTAIN THE ABOVE INFORMATION:

- AHA members: It's all free to you but you must enclose 50 cents for each item to cover postage and handling costs.
- Nonmembers of the AHA: Please submit \$1 (\$2 minimum) for each item requested. All foreign overseas airmail requests enclose \$3 extra for postage.

Direct all inquiries to: AHA Member Services, Box 287, Boulder, CO 80306-0287 USA.

Name _____ Phone _____

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ALSO AVAILABLE FROM THE AHA

Helpful Information for the First-Time Brewer. Relax, Don't Worry, and have Your Own Homebrew with the help of these guidelines, charts and articles. It's a hefty package, so please enclose \$2 (\$5 for nonmembers) for postage and handling.

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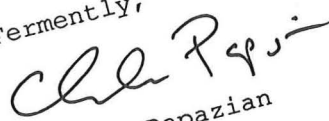
Dear *zymurgy* reader,

For over a decade *zymurgy* has reported the best and latest information on homebrewing. From a small newsletter we have grown to a quarterly magazine with a readership of over 18,000.

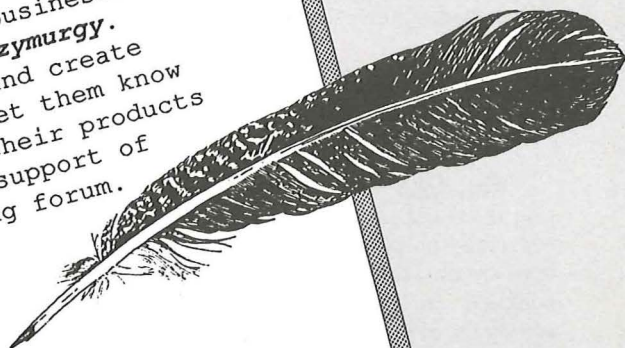
We have been able to produce a quality magazine, not only through the support of homebrewers, but also through the backing of many businesses, businesses that advertise in the pages of *zymurgy*. Look through the pages of this issue. You'll recognize them.

Our surveys show that readers of *zymurgy* are spending nearly 5 million dollars a year on supplies. We're asking you to support the businesses that help us to bring you *zymurgy*. They have helped us grow and create this quality magazine. Let them know you appreciate not only their products and services, but their support of *zymurgy*, your homebrewing forum.

Fermently,



Charlie Papazian



BREW NEWS

MIKE SANDROCK

August A. Busch Jr. Dies at 90

August Busch Jr. died at his home Sept. 29, after a brief illness. Busch had a long and illustrious career as the head of Anheuser-Busch, Inc. He was born in 1899 and, according to an Associated Press story, later went to work at his father's brewery, cleaning vats and sweeping floors.

When Prohibition came, Busch was named general superintendent of brewing operations. With his father and elder brother, Busch helped the company diversify into the production of yeast, corn and malt syrup, refrigeration cabinets, soft drinks,

car and truck bodies and other items to bring the company through the crisis. Busch became president of Anheuser-Busch, Inc. in 1946 and turned it into the world's largest brewery. The company's beer sales in the first half of 1989 accounted for 42 percent of total industry sales in the United States, including imports.

Brew Love

When Mark Metzger and Janet Egelston, co-owners of the The Northampton Brewery in Northampton, Mass., decided to get married, they never thought they would have to get approval from the state legis-

lature. But that is just what the couple had to do because of a state law, dating back to the end of Prohibition, that forbids people related by blood or marriage to jointly own a brewing license and a pouring license.

Metzger, 30, does not disagree with the ordinance, telling the Boston Globe: "It's a good law. It keeps Mr. Budweiser from buying a restaurant for his daughter and getting all her beer for free." Fortunately for true love, Mass. Gov. Michael Dukakis signed a bill allowing Metzger and Egelston to get married and keep their business. The couple said they have been so busy with the brewery that they didn't have time to worry about the situation. The wedding is set for July 7, 1990, and a special beer is being planned. "I guess we'll call it 'Honeymoon Brew' or 'The Legislation Special,'" Metzger said.

"Authentic" Porter Aided By 160-Year-Old Example

Keith Thomas, owner of Brewlab, located in the City of London Polytechnic, London, England, had been trying a variety of different combinations of ingredients in order to arrive at an "authentic" porter. His mission was complicated by the fact that commercial brewers in Britain ceased brewing the porter style of ale in the early part of this century. Now he is confident that he has arrived closer to authenticity than ever before possible, thanks to a strain of yeast taken from a 160-year-old bottle of porter brought up from an 1825 shipwreck off the coast of Littlehampton.

According to an article in CAMRA's *What's Brewing*, Thomas

Micro and Pabbreweries

United States

Openings

Sisson's Cajun Restaurant—Baltimore, Maryland
Melbourne's Brewing Co.—Cleveland, Ohio
Growlers Grill—Columbus, Ohio
The Samuel Adams Brewhouse—Philadelphia, Pennsylvania
International Festhouse/Weeping Radish No. 3—Virginia Beach, Virginia
Pacific Northwest Brewing Co.—Seattle, Washington
Appleton Brewing Co.—Appleton, Wisconsin
Otto Brothers Brewing Co.—Jackson, Wyoming

Reopenings

The Old Colorado Brewing Co.—Fort Collins, Colorado

Canada

Openings

Burlington Brewing Co.—Burlington, Ontario
Suds International—Burlington, Ontario
Kirkland Lake Bavarian Tavern/Bernie's Brew Pub—Kirkland Lake, Ontario
Niagara Falls Brewing Co.—Niagara Falls, Ontario

1989 HOP HARVEST

Hops are harvested 24 hours a day from mid August to mid September. Freshops sells only raw hops, fresh from the vine. Only the finest hops are spared the brutality of pelletization or extraction. All Freshops are kept in cold storage and are alpha analyzed for bitterness. Also available is liquid hop oil, t-shirts, Wyeast liquid yeast, and hop rhizomes from March-May. Write or call to receive varietal information and price list. Serving homebrewers, stores, and microbreweries.



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opened the 160-year old bottle to find a liquid that at least resembled beer, even if, Thomas said, "it tasted like old shoe leather." The yeast strain was found to be still active, and subsequently cultivated and cleaned. Thomas uses the yeast with a circa-1850 Victorian recipe he discovered in his research. The one ingredient in the recipe unavailable today is brown malt, which Thomas elected to

approximate using a combination of pale and chocolate malts.

The resulting brew is called Flag Original Porter, brewed by Premier Ales in West Midlands. To gauge exactly how close Thomas has arrived to an "authentic" porter with this attempt, he has had to locate individuals in their 80s or 90s (old enough to remember porter as it was at the beginning of the century) for

their assessment. Two such gentlemen reportedly confirmed that the modern-day porter was true to their memory of the original.

Kids, Don't Try This At Home

The dangers and injuries caused by flying corks from Champagne bottles are well-documented. But in a new twist, a 36-year-old sports fan was taken to a hospital emergency room after trying to open a beer bottle with his teeth while watching a baseball game on a hot afternoon this summer. According to the New England Journal of Medicine, the force of the compressed gas in the beer bottle knocked the cap down the man's throat into his esophagus. Attempts to take the beer cap out with an esophagoscope failed because the sharp edges of the cap were embedded in the sides of the man's esophagus. So physicians performed a thoracotomy, during which the bottle cap, bearing a Miller High Life logo, was found and removed. The man recovered.

British Compromise

The British government's latest recommendations are that the country's biggest brewers won't have to sell off roughly 22,000 pubs as had previously been recommended. New proposals are that brewers will be allowed to own more than 2,000 pubs each. But half of the pubs above that number would have to be "free houses," which can sell beer of their choice and not require customers to only buy the owner's beer.

Easy Brew

Its motto is "From beer lover to brewmaster in 60 minutes," and customers in a 2,000-square-foot downtown Toronto small-scale brewery can now brew their favorite beer in an hour. Select Brewing Services, which opened in August, provides the equipment, ingredients and assistance throughout the brewing process. No brewing experience is necessary.

The first step is to choose what kind of beer to brew. Then an hour is required to boil the wort. After the boil is complete, the customer adds

the yeast. After two weeks, (during which time the beer is fermented, cold-aged, filtered and carbonated) the customer returns to bottle the beer for about 30 minutes. The beer is then ready to drink, and has a shelf life of roughly eight weeks, longer if refrigerated. The cost is \$70 to \$80 per 489-liter batch.

Tall Brewers

A new national homebrew club for tall drinkers has been formed: the Tall Brewers of America, also known as The Longnecks. According to club secretary-president Bill Friday, the group came into existence one late evening at the Ohio River Beer Tasting, when people discovered "they were not having to crick their necks to talk with one another." To become a member, males must be

6 feet 3 inches or taller, and females should be taller than 5 feet 9 inches. For more information write to Friday at 103 E. Oak Street, West Lafayette, IN, 47906.



The Tall Brewers.

Amazing Crystals

A press release from Carl D. Dumbra states that his company, Forward American Wines, is well-advanced in experiments with dried crystals that produce wine, beer and liquor, complete with alcohol, when you add water. For more information, write to Dumbra at 726 38th Street, Sacramento, CA, 95816.

Texas Beer

Lone Star beer, long the choice of urban cowboys, may become a chic, imported brew in London pubs and the Australian outback if the Heileman Brewing Company is successful in its marketing plans. "There is a great mystique for people in other countries about America that relates to Texas," an Associated Press story

CALENDAR OF EVENTS

1990

Jan. 20	Bay Area Brew Off, Dublin, Calif., HWBTA Sanctioned Competition. Contact Bob Hufford at (415) 846-1991.		
Feb. 10	Seventh Annual Kansas City Bier Meister Regional Homebrew Competition, Mission, Kan. HWBTA Sanctioned Competition. Entry deadline is Jan. 27. Contact Alberta Rager, (913) 236-5953; Kirsten Pedersen, (816) 333-6361; Kevin Fogarty, (913) 788-7413; or Curt Hulse, (913) 384-3698.	April 24	Entry deadline for the AHA National Homebrew Competition.
Feb. 10	Hail to Ale, India Pale Ale. AHA Sanctioned Club-Only Competition. Entry deadline is Feb. 6. Contact Daniel Bradford, AHA, (303) 447-0816 for details.	April 28	Maltose Falcons 1990 Mayfaire Regional Homebrew Competition, Woodland Hills, Calif. AHA Sanctioned Competition. Entry deadline is April 21, 1990. Contact R. Bruce Prochal at (818) 504-9400 for details.
March 3	New England Regional Home Brew Competition, Westport, Mass. AHA and HWBTA Sanctioned Competition. Contact Leslie Reilly at (508) 636-5154 for details.	May 5	National Homebrew Day
March 9-10	The HWBTA's 1990 National Homebrew Competition, Kansas City, Mo. Entry deadline is Feb. 23. A beer judge certification exam will be given. Contact Alberta Rager, (913) 236-5953 for details.	May 5	Bock is Best. AHA Sanctioned Club-Only Competition. Entry deadline is April 30, 1990. Contact Daniel Bradford, AHA, (303) 447-0816 for details.
March 29-31	Homebrewers Alliance Bluebonnet Conference and Competition, Plano, Texas. HWBTA Sanctioned Competition. Contact Mike Leonard at (214) 234-4411 for details.	June 13	Final round of judging for the AHA National Homebrew Competition, Oakland, Calif.
April 22	Kenosha Bidal Society Regional, Kenosha, Wis. HWBTA Sanctioned Competition. Entry deadline	June 13-16	AHA 12th Annual National Homebrewers Conference, Oakland, Calif. Contact the AHA at (303) 447-0816.
		Aug. 3	The Alamo Cup, San Antonio, Texas. HWBTA Sanctioned Competition. Contact Phillip Manna at (512) 697-9521 for details.
		Aug. 29-Sept. 2	National Microbrewers Conference, Denver, Colo. Contact the Institute for Brewing Studies at (303) 447-0816 for tour itinerary.

People wishing to list events should send the information to zymurgy Calendar of events, PO Box 287, Boulder, CO 80306.

Notes to competition organizers: The AHA must receive written confirmation that a competition has been sanctioned by the HWBTA from Pat Baker, Sanctioned Competition Program Co-director, before announcing the event in zymurgy. Competition organizers wishing to apply for AHA sanctioning must now do so at least two months before the event.

quotes Barry McAlister as saying. McAlister is an Australian who is a vice president for Lone Star, brewed in San Antonio. Lone Star is moderately priced in Texas, but plans are to sell the beer as a premium import with a higher price tag in Australia, Japan, Britain and Mexico.

Winchester Brewing Co. Offers Beer to Go

San Jose, Calif. — While many mass-produced bottled and canned beers are marketed as “draft,” the Winchester Brewing Co. is the first brewpub to offer genuine brewed-on-premises draft beer to go in a 32-ounce refillable glass mug. Now beer drinkers can take home Winchester’s Pale Ale, Red Amber and Special Porter in the jarlike mugs for an introductory price of \$4.00 and refills for \$3.00.

Oregon Brewers Festival

Portland, Ore.— Approximately 18,000 people attended the second Oregon Brewers Festival in Riverfront Park, where they enjoyed sampling more than 50 beers provided by 35 U.S. and Canadian microbreweries and brewpubs.

“It exceeded our expectations,” said Kurt Widmer, president of the Oregon Brewers Association (OBA), sponsor of the festival. This year’s attendance represents 80 percent growth over last year’s inaugural festival.

The OBA was assisted at the festival by the Oregon Brew Crew homebrew club, which organized 300 volunteer servers for the event.

Great British Beer Fest

The Campaign for Real Ale’s Great British Beer Festival was a success. The club writes that “after strenuous use of the tasting mechanism” the following winners were selected: Hop Back Brewery’s “Summer Lightening,” Whitby’s Own Brewery’s “Force Nine” and Sara Hughes’ “Dark Ruby Mild.” For more information about the Campaign for Real Ale, write to Iain Dobson, 34 Alma Road,

St. Albans, Hertsfordshire, United Kingdom AL1 3BW, England.

A Grape Invention

Most people know that Johannes Gutenberg is credited with inventing movable type and the first printing press, around 1440. But what is not widely known is that Gutenberg, working in Mainz, Germany, used a wine press to print his first page. The page was taken from the Bible, which he figured was sure to sell.

AHA Sanctioned Competitions

Wort Processors Win Weiss is Nice

Bill Murphy of the Boston Wort Processors took first place with his “Weizen Geizer.” The Wort Processors have also emerged as the winners of the Bock is Best and Hail to Ale competitions.

Second place went to Art Steinhoff of the Kenosha Bidal Society. Third place was taken by Paul Carrier and Ken Peal of Hop Barley and the Ale’ers. Of singular note in this competition is that only one beer out of 26 had obvious fermentation problems.

Wisconsin State Fair

There were 201 entrants in the Wisconsin State Fair Homebrew show, held July 15 and 16 in Milwaukee. Best of Show was a barley wine by Brian North of Franklin, Wisc. North also took first place in the porter and old ale categories. Other first-place winners in the best-of-show round were: Larry

Krolikowski for his Christmas ale in the unusual beer category; David Norton for his strawberry-rhubarb mead; Dennis Minikel for Doppelbock; Tony McCauley in the fruit beer category for his dark cherry ale; Peter Jens Berger for European lager; Mark Richmond for pale ale; Paul Stuart for Continental dark; Jim Fisher for wheat beer; and Glenn E. Schultz for Dunkel Weizen.

Other entries that placed in the first-place point range but did not go on to the best-of-show round were: David Norton for European lager; Stan Koteck, Art Steinhoff, James Johnson, Rick & Barrie Mayer, and Tom Sweeney for pale ale; Arthur Lies for wheat beer; Paul Stuart for Continental dark; Steve Klafka and Art Steinhoff for Dunkel Weizen; Robert Drouth for porter; Dana Edgell with spruce ale, James Johnson with honey lager and Rick Solarez with Ginger Ale in the unusual beer category; Larry Krolikowski with cherry stout in the fruit beer category; and Michael

Ziolkowski Jr. with sparkling Hippocras in the mead category.

Parched Palate Extravaganza

The Second Annual Parched Palate Extravaganza, held August 27 in Boise, Idaho, attracted 26 entrants. First place in the American light lager, and the best of show, was Ed Matjeka of Boise, Idaho.

First place in the European light lager category was David Poe of Baker, Ore., while Brian Gerhard, of Boise, won the wheat beer competition. Ed Matjeka, also of Boise, took the pale ale category.

Ventura County Fair

There were 14 entrants in the Ventura (Calif.) County Fair on Aug. 12. The best-of-show winner was Paul Gleason of Camarillo, Calif., for his Continental light. Gleason also took first in the pale ale category, while Wynn Atterbury won the steam beer competition.

Great American Beer Festival VIII a Success



The Great American Beer Festival VIII, held October 20 and 21 at the Regency Hotel in Denver, Colo., sold out on its second night to an enthusiastic crowd. People in the packed room cheered the winners of the Professional Panel Blind Tasting and the Consumer Preference Poll.

The Great American Beer Festival is the nation's only domestic beer festival, presenting the familiar large breweries' brands next to exotic beers from the fledgling microbreweries and pubbreweries that are springing up across the continent.

Sponsored by the Association of Brewers and KBCO-FM, a local radio station, the Great American Beer Festival hosted approximately

6,000 people. Attendees sampled from 286 different beers presented by 102 U.S. breweries.

The Professional Panel Blind Tasting, sponsored by the Beer Institute, Washington, D.C., brought together 12 professionals from the brewing industry. These experts awarded medals of excellence in 26 different categories. Medals were awarded for adherence to a style and quality in brewing.

The Consumer Preference Poll, run by the Consumer Preference Poll Committee (an independent organization), tallied votes submitted by the attendees for the top ten favorite beers.

The Great American Beer Festival's purpose is to educate the public about beer quality, variety and

appreciation. Attendees received a commemorative tasting glass and a 48-page program with information on beer styles, beer tasting and profiles of beers and breweries. The goal is to inform the public about the depth, variety and beauty of American beers, and to alert them to the American beer revolution that is sweeping the country.

When it first began, the Great American Beer Festival was a tiny event of 400 people, a few dozen breweries and not too many more beers. Now in its eighth year, it is a giant festival, bringing people from all across the United States together for two days of great beer tasting.

Winners of the 1989 Great American Beer Festival

Professional Panel Blind Tasting

ALT BEER

Gold - *Samuel Adams Boston Stock Ale*, Boston Beer Co., Boston, Mass.

Silver - *Sun Valley White Cloud Ale*, Sun Valley Brewing Co., Sun Valley, Idaho

CREAM ALE

Gold - *Little Kings Cream Ale*, Hudepohl-Schoenling Brewing Co., Cincinnati, Ohio

Silver - *Sun Valley Cream Ale*, Sun Valley Brewing Co., Sun Valley, Idaho

WHEAT BEER

Gold - *Stoudt's Weizen*, Stoudt Brewery, Adamstown, Pa.

Silver - *Chicago Vice Weizen*, Goose Island Brewing Co., Chicago, Ill.

Bronze - *Marin Weiss*, Marin Brewing Co., Larkspur, Calif.

BROWN ALE

Gold - *Full Sail Brown Ale*, Hood River Brewing Co., Hood River, Ore.

Silver - *Old Brown Dog Ale*, Northampton Brewery, Northampton, Mass.

PALE ALE

Gold - *Sierra Nevada Pale Ale*, Sierra Nevada Brewing Co., Chico, Calif.

Silver - *Post Road Real Ale*, Old Marlborough Brewing Co., Marlborough, Mass.

Bronze - *Mount Tamalpais Ale*, Marin Brewing Co., Larkspur, Calif.

BLOND / GOLDEN ALE

Gold - *Catamount Gold*, Catamount Brewing Co., White River Jct., Vt.

Silver - *Oldenberg Blonde*, Oldenberg Brewery, Fort Mitchell, Ky.

Bronze - *Summit Sparkling Ale*, Summit Brewing Co., St. Paul, Minn.

SCOTTISH ALE

Gold - *Sun Valley Our Holiday Ale*, Sun Valley Brewing Co., Sun Valley, Idaho

(Continued ...)

Winners of the 1989 Great American Beer Festival

(Professional Panel Blind Tasting, Continued)

Silver - *Blue Whale Ale*, Pacific Coast Brewing Co., Oakland, Calif.

INDIA PALE ALE

Gold - *Rubicon India Pale Ale*, Rubicon Brewing Co., Sacramento, Calif.

Silver - *Liberty Ale*, Anchor Brewing Co., San Francisco, Calif.

FRUIT BEER

Gold - *Oldenberg Cherry Lager*, Oldenberg Brewery, Fort Mitchell, Ky.

HERB BEER

Gold - *Christmas Ale*, Anchor Brewing Co., San Francisco, Calif.

Silver - *Tri-City Winter Warmer*, Tri-City Brewing Co., Kennewick, Wash.

PORTER

Gold - *Tower Dark*, Butterfield Brewing Co., Fresno, Calif.

Silver - *George Washington Porter*, Philadelphia Brewing Co., Philadelphia, Pa.

Bronze - *Anchor Porter*, Anchor Brewing Co., San Francisco, Calif.

STOUT

Gold - *San Quentin Breakout Stout*, Marin Brewing Co., Larkspur, Calif.

Silver - *Sierra Nevada Stout*, Sierra Nevada Brewing Co., Chico, Calif.

Bronze - *Rubicon Stout*, Rubicon Brewing Co., Sacramento, Calif.

BARLEY WINE

Gold - *Old Foghorn Barley Wine*, Anchor Brewing Co., San Francisco, Calif.

Silver - *Old Dipsea Barley Wine*, Marin Brewing Co., Larkspur, Calif.

AMBER ALE

Gold - *Full Sail Amber Ale*, Hood River Brewing Co., Hood River, Ore.

Silver - *1989 Autumn Ale*, Alaskan Brewing and Bottling Co., Douglas, Alaska

Bronze - *Hope Red Rooster Ale*, Hope Brewery Corp., Providence, R.I.

BOCK BEER

Gold - *Kessler Grand Teton Doppelbock*, Montana Beverage Ltd., Helena, Mont.

Silver - *Old German-Style Bock*, Frankenmuth Brewery Inc., Frankenmuth, Mich.

Bronze - *Dark Horse*, Virginia Brewing Co., Virginia Beach, Va.

EUROPEAN AMBER

Gold - *Schildbrau*, Millstream Brewing Co., Amana, Iowa

Silver - *Erin Brew*, Cleveland Brewing Co., Cleveland, Ohio

Bronze - *Wild Boar Special Amber*, Georgia Brewing Co., Atlanta, Ga.

VIENNA / MÄRZEN / OCTOBERFEST BEER

Gold - *Market Street Oktoberfest*, Bohannon Brewing Co., Nashville, Tenn.

Silver - *Gartenbrau Oktoberfest*, Capital Brewery, Middleton, Wisc.

Bronze - *Newman's Albany Amber*, William S. Newman Brewing Co., Albany, N.Y.

EUROPEAN PILSENER

Gold - *Manhattan Gold Lager*, Manhattan Brewing Company, New York, N.Y.

Silver - *D'Agostino Fresh*, Manhattan Brewing Co., New York, N.Y.

Bronze - *Saranac 1888*, F.X. Matt Brewing Co., Utica, N.Y.

MUENCHNER

Gold - *Old German Dark*, Frankenmuth Brewery Inc., Frankenmuth, Mich.

Silver - *Helenbock Beer*, Friends Brewing Co., Helen, Ga.

AMERICAN PILSENER

Gold - *Busch*, Anheuser-Busch, Inc., St. Louis, Mo.

Silver - *Miller High Life*, Miller Brewing Co., Milwaukee, Wisc.

Bronze - *Budweiser*, Anheuser-Busch, Inc., St. Louis, Mo.

AMERICAN LIGHT PILSENER

Gold - *Hudepohl 14-K*, Hudepohl-Schoenling Brewing Co., Cincinnati, Ohio

Silver - *Michelob Light*, Anheuser-Busch Inc., St. Louis, Mo.

Bronze - *Boston Lightship*, Boston Beer Co., Boston, Mass.

AMERICAN PREMIUM PILSENER

Gold - *Coors Extra Gold*, Adolph Coors Co., Golden, Colo.

Silver - *Coors*, Adolph Coors Co., Golden, Colo.

AMERICAN PREMIUM DARK PILSENER

Gold - *Lowenbrau Dark Special*, Miller Brewing Co., Milwaukee, Wisc.

Silver - *Michelob Classic Dark*, Anheuser-Busch, Inc., St. Louis, Mo.

Bronze - *Berghoff Dark*, Berghoff-Huber Brewing Co., Monroe, Wisc.

DRY BEER

Gold - *Bud Dry*, Anheuser-Busch, Inc., St. Louis, Mo.

Silver - *Diamond Head Dry*, Honolulu Brewing Co., Honolulu, Hawaii

Bronze - *Esquire Extra Dry Beer*, Jones Brewing Co., Smithton, Pa.

MALT LIQUOR

Gold - *St. Ides Premium Malt Liquor*, McKenzie River Corp., San Francisco, Calif.

Silver - *Midnight Dragon Malt Liquor*, Hudepohl-Schoenling Brewing Cincinnati, Ohio

Bronze - *King Cobra*, Anheuser-Busch, Inc., St. Louis, Mo.

Consumer Preference Poll

1. *Samuel Adams Boston Lager*, Boston Beer Co., Boston, Mass.
2. *Pete's Wicked Ale*, Pete's Brewing Co., Palo Alto, Calif.
3. *Telluride Beer*, Telluride Brewing Co., Telluride, Colo.
4. *Erin Brew*, Cleveland Brewing Co., Cleveland, Ohio
5. *Wild Boar Special Amber*, Georgia Brewing Co., Atlanta, Ga.
6. *Pecan St. Lager Beer*, Old City Brewing Co., Austin, Texas
7. *Alaskan Amber Beer*, Alaskan Brewing and Bottling Co., Douglas, Alaska
8. *Oldenberg Blonde*, Oldenberg Brewery, Ft. Mitchell, Ky.
9. *Raspberry Ale*, Marin Brewing Co., Larkspur, Calif.
10. *Vail Ale*, Vail Brewery Co., Vail, Colo.

JACKSON ON BEER

MICHAEL JACKSON

How to Get Stuck on a Berlin Wall

People who know my books like to introduce me to their friends in the beer business.

The result is often what happened in Berlin. When my German friends grandly introduced me to the barkeeper, the response was a half-smile of incomprehension. Then recognition dawned.

"Ah yes, we have pictures of you on the wall!" They turned out, I am relieved to say, not to be pictures of me, but from my books.

They were displayed in the corridor that led to the lavatory. You will see them should you wish to relieve yourself at this establishment, the Mommsen-Eck am Brunnen, "Haus der 100 Biere."

After sampling your way through your own choice of 100 bottled beers and 20 on draft, you probably will wish to avail yourself of this facility. First, of course, you have to find the place, which is at 45 Mommsenstrasse, where that street is met by Wilmersdorferstrasse (Eck means "corner") in Charlottenburg, the Kensington of Berlin.

The bar has been there 20 years, but only in the last 10 has it begun to develop its selection of beers. Many of these are German, but there were also Belgian and British specialties.

However much I regret the move to modify the Reinheitsgebot, I must

admit that it has opened a few minds and palates in beer-rich Germany to some of the more distinctive brewing styles from elsewhere.

Mommsen-Eck also has more than 100 spirits and liqueurs. Berlin is still an important brewing city but, like London with its dry gin, it also has a half-overgrown tradition in the production and consumption of spirits.

The most beery memory of old Berlin was in the delightful snack bar at the city museum. The bar is called the Alt-Berliner Weissbierstube im Berlin Museum and is located on Lindenstrasse 14.

As its name suggests, this bar is devoted to Berliner Weissbier, the city's distinctively sour, lactic style of top-fermenting wheat beer.

I was attracted by the very idea of a bar devoted to the local specialty beer, and especially as a feature of the city's museum. Imagine a porter bar in the British Museum, or a pale ale pub or wee heavy house in the civic galleries of Burton or Edinburgh.

I was disappointed that the Weissbierstube turned out to be a tied house, offering only the product of the Kindl brewery, but I still enjoyed drinking it in an atmosphere that seemed genuinely of another age.

The bar displays about 50 antique Weissbier glasses and bottles, some dating from the 1700s, and has the odd advertisement from long-defunct Weissbier breweries. It plays tapes of old Berlin songs and offers a beautifully displayed buffet of Berlin specialties, featuring pickled herrings and sausages.

Kindl and Schultheiss are the two big West Berlin breweries, both members of national groupings, and each has a Weissbier as a specialty in its range. Neither is as committed as it might be to this specialty; both are more interested in making fairly anonymous (by German standards) Pilsener beers. Sound familiar?

As I have no doubt observed before, when Napoleon's troops



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occupied Berlin they dubbed Weissbier "the Champagne of the North." Just as some sparkling wines are tank-conditioned and others matured in the bottle, so it is with Berliner Weissbier. The Kindl version is tank-conditioned, the Schultheiss version matured in the bottle.

Before going to Berlin I made official approaches to both companies, asking if I might see their Weissbier production. The Kindl company, which has only one brewery, said they were reorganizing and a visit would not be possible.

Schultheiss makes its Weissbier in a small brewery in Schöneberg, and has other breweries in Spandau and Kreuzberg. They also produce Engelhardt Charlottenburger Pilsener. They did agree to let me see the Weissbier brewery, though reluctantly, and only after I had dutifully seen their Pilsener production.

The reluctance did not make much sense, because they produce their Weissbier traditionally. The mash (1.030 to 1.032) contains 50 percent wheat and is pitched with a

sympiotic culture of top-fermenting yeast and lactobacillus.

A proportion of wort aged between three and six months also is added. After a primary fermentation, the brew then has from three months to a year in secondary fermentation before being bottled with a dosage. It has a further month's bottle-conditioning before being released. Devotees then keep it one to two years before consuming it.

This keeping period brings out the full fragrance and fruitiness of the beer, though the latter usually is further emphasized by the addition of raspberry syrup or essence of woodruff. Bars sometimes list their Weissbier *rot, grün oder ohne* ("red green or without").

When I took the underground to East Berlin there was plenty of red, but apparently a shortage of green. Kindl and Schultheiss both had breweries in the eastern part of the city before the war, and it now has a state-owned brewery combine. Among its breweries, one makes a Weissbier, and does so using traditional methods.

Because of the tied-house system (albeit through contracts and loans rather than necessarily ownership), I was not able to sample Kindl and Schultheiss Weissbiers alongside the generic East Berlin version.

Next summer, there could be a new Weissbier in Berlin, though I would not bet on it. Any brewer would think twice about introducing a lactic culture into a building where a more conventional beer is made.

At a new brewpub on Luisenplatz, the square opposite the palace of Charlottenburg, Jürgen Solkowski told me he would like to make a wheat beer of some description. For the moment, his specialty is an unfiltered, heavily sedimented, tawny Vienna-style lager of around 1.050.

Earlier attempts to establish a brewpub in Berlin (Haus Wien, 26 Ku'dam) ran into difficulties, though there were plans to revive that business. They obviously needed better pictures on the walls.

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I'm a Bitter Man

(Reflections on Real Ale)

There are some things a person never forgets. I'd had a tiring morning at the British Museum. Traversing all those rooms and all the historic splendor contained within them was no easy task. After a few hours, my feet were sore and my mind was filled with questions, so I decided to relax and reflect upon the morning's events. It was lucky for my colleague and me that we didn't have to go far for nourishment, because we had built quite a thirst. After all, traveling through 5,000 years of history is no easy task. We wearily made our exit from this grand place, out past the large iron fence and across the street. In no time at all, we found ourselves standing at the bar of the Museum Tavern.

With great anticipation, we ordered "a pint of Brakspear's Special and a pint of Abbot Ale, please." We anxiously watched as the publican filled our glasses. We muttered a chorus of "cheers" and sipped our first real ale of the day. Damn! It tasted good to the point of perfection. Well, we drained a few more jars that afternoon and many more over the next week and a half while taking in the English and Scottish cultures.

While I'm sure that anyone who reads these pages each year is a lover of good beer and has sampled his or her share of fine fermented beverages, I'd wager that only a small percentage have drunk what I

would call "traditional real ale" in its commercial form. Of course, I'm not including homebrew when I make that statement. Anyone who has brewed their own beer knows how different and special that true freshness makes a quality drink.

No, what I'm talking about here is walking into a neighborhood pub and ordering a beer that may be fresher than your homebrew! If it's well kept, that is. It's a style of beer that is virtually unknown in the United States. Even the wonderful microbrewed ales found in this



PHILIP DAVIA

country are not quite the same as those that can be found in the United Kingdom. The bottled and kegged imported ales we drink here in the United States are not even close in taste to the real ale that can be found in almost any pub there. While many imports may be fine drinks, they are not a good indication of what traditional English ale tastes like. Now, homebrewed ale is a different story altogether. As homebrewers, we have the ability to duplicate the real thing.

As most homebrewers already know, Great Britain is known by many beer lovers for its long brewing history and great diversity of beer. Beer in this context almost exclusively means ale. That's perhaps a bit strange to most North American beer drinkers. The slogan "beer and ale" always gets on my nerves a little bit, because it's all beer. What fascinates me is the wide range of flavor profiles that fall under the category "ale." I've spent time traveling in the United Kingdom, sampling as many different types of beer as I could find. It has been a lot of fun for me, and I would like to share some of my findings with the readers of *zymurgy*.

A National Drink

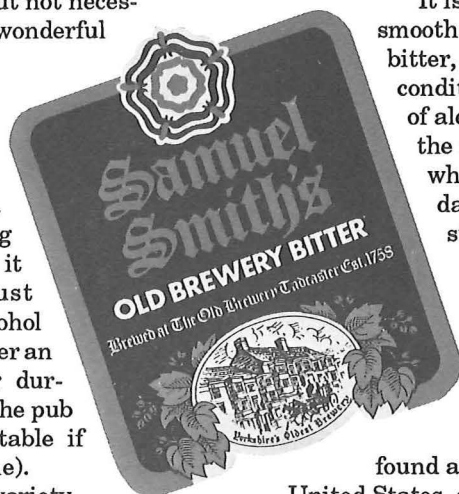
The national drink, known simply as "bitter," is probably the most familiar to North American beer lovers. Bitter really can include many different flavor profiles depending on what type you order

and where you are geographically. An ordinary bitter (or just "bitter") in the south will be a thin-bodied, hoppy brew around 3 to 4 percent in alcohol content. It will probably be light in color, but not necessarily. These are wonderful beers to drink on a balmy 60-degree day, after a long walk or as a thirst quencher at lunch. Its light, refreshing quality can make it hard to drink just one. The lower alcohol content makes bitter an ideal session beer during an evening at the pub (or your kitchen table if you brew it at home).

The "special" variety will be a bit more malty and a bit stronger, with an alcohol content in the 4 to 5 percent range. The color will be gold to dark red. In the south, special will have an ample supply of hops to balance the increased malt content, while the northern counterpart will tend to be sweeter in the nose. I have to say that, while southern English beer can be well-hopped, I've never run across a pint that had the flowery aroma of American microbrewed English style ale. I'm speaking of Sierra Nevada Pale, Red Hook ESB, Anchor Liberty and other similar ales. I believe that these American microbrewers have created a unique style of ale which is characterized by a very distinct, aromatic, hoppy character. The differences between North American hops and English hops are probably the main distinction between American and English ale.

Another traditional ale you may find on draft is "mild ale." It is still possible to find mild ale in England, but there are very few breweries that produce it anymore and therefore very few pubs offer it. If you walk into a pub that has a "mild" on draft, give it a try. These are truly unique ales. I've never found this style anywhere outside England. Grants of Yakima, Wash., brews something called Celtic Ale that is similar to an English mild,

but true mild ale must be served on draft. A traditional mild will vary in color from amber to almost black, and will be low in alcohol and carbonation.

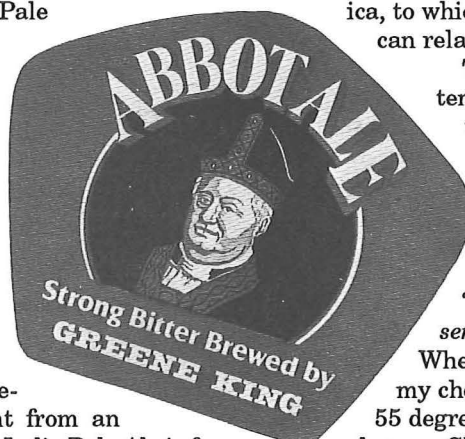


It is an exceptionally smooth drink, as is most bitter, due to perfect conditioning. This style of ale would astonish the many beer drinkers who still hold the "It's dark so it must be strong" attitude.

Various styles of real ale found in the United Kingdom have become nearly extinct. These styles seem to have

found a new home in the United States, and are being produced by many microbreweries and brewpubs across the country. The first that comes to mind in this respect is India Pale Ale. IPA is virtually nowhere to be found in "real" form in England, at least by name. I've tried a few draft ales with the tag IPA, but they are very difficult to find and are really no different from an ordinary bitter. India Pale Ale is far more popular with American homebrewers than with English commercial brewers.

The traveling beer drinker also will be very hard-pressed to find something called porter. I've only come across one, available at a brewpub in London called the Orange Pub (Pimlico Road). This beer was very different from what I expected a porter to be. It was reddish amber in color and very sweet, with little hop aroma. This was a completely different style of beer from Anchor Porter, which I thought was a proper porter. Again, because of the lack of porter's availability, this style of beer seems much more popular in North America than it is in England.



Regardless of the type of ale you choose, some characteristics will remain the same across all styles.

First, the beer is served on draft. Real ale loses its unique smoothness when bottled, because of the lively carbonation of bottled beer. Heavy carbonation robs the beer of that characteristic smoothness and gets in the way of flavor. That's not a rap on bottled beer, but we are talking about a very specific style of ale. It's a unique drink that must be served properly for full appreciation.

Second, the beer must be "alive," meaning unpasteurized. The fresh, natural flavor is startling to the uninitiated drinker. The average American beer drinker has never really had fresh, unpasteurized beer. That same freshness has given birth to the microbrewery and homebrewery phenomenon in North America, to which *zymurgy* readers can relate.

Third, the serving temperature should be right. This is not as big a deal as some people seem to make of it. I'd like to say something here, "Real Ale is not served warm!"

Whew! Got that off my chest. From 50 to 55 degrees F (10 to 13 degrees C) is an ideal temperature to serve naturally conditioned, draft ale. The glass is cool to the touch. If bitter is served too cold, it loses its flavor. I wouldn't serve a bottle of Augsburger or Coors at 55 degrees (13 degrees C) on an 85-degree day. I like icy cold drinks in the summertime, and for that reason I don't keg my ale in the summer months. There is a beer for all occasions.

With the hope that all of you beer aficionados can get to the United Kingdom to sample real ale in its grandest form, I'd like to include a small list of ales that I've found to be worth trying again. Cheers!

You can find all these ales and hundreds more along with descriptions and locations in the CAMRA Good Beer Guide.

Greene King's Abbot Ale
Brakspears Special (my very own favorite!)
Youngs Special
Courage Directors
Theakston's Best Bitter
Theakston's Old Peculier
Younger's No. 3
Sam Smith's Old Brewery Bitter
Sam Smith's Museum Ale
Ruddles County Bitter
Bateman's
Tetly's
Morrell's Varsity

Here are a few recipes for those who want to brew bitter at home.

Arsenal Best Bitter (malt extract recipe)

Ingredients for 3 gallons

3.5 pounds Edme dried malt extract
3/4 pound Crystal malt
3/4 ounce Fuggles hops (30 minutes)
1/2 ounce Fuggles (1 minute) ale yeast (take your pick)

Original gravity: 1.045

Brewer's Specifics

I keg this beer in a 2 1/2-gallon Edme plastic pressure barrel, which is why the recipe is scaled down. For a 5- to 5 1/2-gallon batch, double the ingredients. This ale is rich and strong (though not too strong), leaning toward the malty-sweet side. Prime with 1/4 cup sugar for a 2 1/2-gallon keg; 1/3 cup for a five-gallon keg.

Flowers Bitter (all-grain recipe)

Ingredients for 5 gallons:

6 pounds 2-row malt
1/2 pound crystal malt
1 1/2 ounce Fuggles hops (45 minutes)
1 ounce Fuggles hops (steeped 15 minutes after boil)
1/2 ounce Northern Brewer hops (dry hopped; i.e., drop them in the keg)
ale yeast (your choice)

Original gravity: 1.037

Brewer's Specifics

Use standard mashing techniques. This beer was kegged seven days after brewing, using gelatin finings. The ale is very light in color, with a flowery hop aroma (hence the name) that marries well with the light malts used.

Phil Davia has been homebrewing for about three years, but because of hot Chicago

summers he only brews from October to May. Phil is a software consultant (computer programmer) and pursues jazz and jazz guitar. He has traveled to England, Scotland, Belgium, West Germany, France, Austria, Switzerland and the U.S. Pacific Northwest, enjoying great beer in all those places. Phil enjoys brewing ales and serving them from his minibarrels at home.

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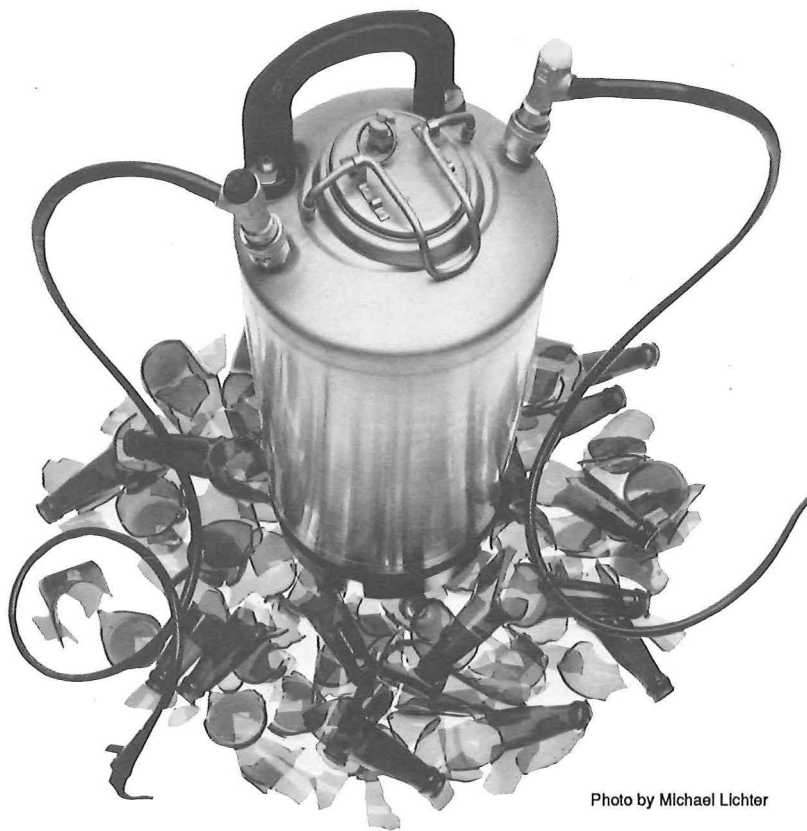


Photo by Michael Lichter

Better than Bottles?



One of the most common complaints of active homebrewers is that bottling takes a lot of fun out of homebrewing.

They look for quart returnable or Champagne bottles, but finding quart

beer bottles is next to impossible and Champagne bottles are very heavy and a bit expensive.

The answer for a growing number of homebrewers is the canister. Several manufacturers make canisters of good quality, including Cornelius, Firestone, Alloy Products and John Wood. All these systems are essentially the same. Why would you want to use a canister system?

Aside from avoiding the bottling nightmare, I think draft beer has a better taste and is better conditioned. Canisters are perfect for parties and are an ideal size for homebrew batches. Besides, having a draft system at home has to be the secret, or not so secret, dream of all homebrewers.

So why doesn't every homebrewer have one? The biggest

JACKIE RAGER

drawback is the cost. Some say that availability is the problem but it really isn't. Several companies specialize in dispensing equipment. Just carry your banker with you when you go. The most economical way to acquire a canister system is to find the major components at garage sales, junkyards, from retiring brewers or any other place you can think of. However, the cost of this search could equal the money saved over purchasing a system at the dispensing companies or your local homebrew supply store.

What is a canister system? The following items are integral parts of the system:

- Product tank. This vessel replaces the bottles.
- CO₂ cylinder. Holds the propellant of the system. CO₂ pushes the beer out of the product tank.
- Pressure gauges. Although you could get by with only one gauge (for the product tank), I recommend a second one to measure the pressure in the CO₂ cylinder.
- Gas manifold and regulator. This controls the pressure from the CO₂ cylinder to the product tank. It is also a convenient place to put the pressure gauges. I recommend getting a manifold with at least two output ports.
- CO₂ lines and fittings, liquid lines, fittings and dispenser(s).

In addition to the above necessities, some items to increase the system's capabilities are a gas fitting with pressure gauge and relief valve, and a liquid-to-liquid jumper line. These items will allow you to do tank-to-tank transfers under pressure. *Make sure that all fittings and tanks match. Some are ball lock and some are pin lock.*

After you have located and purchased your system you should assume that it is completely

contaminated. The first thing to do is give it a thorough cleaning and sterilizing. Completely disassemble the tank and clean, sterilize and inspect each piece. Be careful disassembling the system. It's a good idea to record the position of each piece so you can put them back together in the right order.

The dispensing equipment company will have the tools necessary for this project. If you can't get the tools, a pair of vise grips and a lot of caution will do the job. Normal cleaning must include disassembling the hose fittings and sterilizing both the fittings and the hoses. Sulfite can be used to remove any odors in the equipment. Chlorine is best but is corrosive, so the contact time should be limited to 24 hours or less.

Filling your canister and priming the beer aren't really difficult, but there are a couple of things that can be done with a canister that are not possible in the average bottle environment. One is reducing the oxygen exposure and testing the seal prior to the natural carbonation. Once the tank is sterilized you should connect the CO₂ cylinder and pump some CO₂ into the tank with the tank's top either off or loose. Since CO₂ is heavier than air, the air will be forced out the top of the tank. When you siphon the beer into the tank it will exit the hose into a layer of CO₂, eliminating oxidation and contamination problems.

When priming, I recommend using one-third the sugar you use when bottle conditioning to prevent overcarbonated beer. Once the tank is filled and primed, affix the tank's top and once again apply pressure to the tank. Add enough pressure to make sure the seal is tight, then reduce the pressure to five pounds. This will keep the seals tight until the yeast creates more pressure. It wouldn't hurt to do periodic pressure

checks during the carbonation period to be certain the seals are intact.

Now that the beer has been carbonated in the canister, you should know a few things about storage and dispensing. There will be a yeast sediment in the bottom of the canister. Most of this can be extracted in the first glass you dispense. The sediment should be drawn off prior to moving the canister (i.e., for parties). This will make the beer you serve come out clearer. Beer may be stored in the canister at room temperature or under refrigeration. The storage pressure should be at least 15 pounds. The best dispensing pressure is four to eight pounds.

One way to improve the clarity of the beer you dispense is to fit the bottom of the canister outflow tube with the tip found on a regular racking tube. With this addition you can transfer the finished beer under pressure from one canister to another.

Much information is not included in this article, but with this and the information included with your system, you can have uncontaminated draft beer from the canister the first time, and every time.

Jackie Rager has been a serious homebrewer for ten years. He is a charter member of the Kansas City Bier Meisters and is currently treasurer of the Homebrewers Alliance. Jackie is also one of the managing partners of Bacchus & Barleycorn LTD. of Merriam, Kan., and has conducted homebrewing classes for the last five years. No doubt his skills as a recognized beer judge have helped him with that and with his involvement as vice president of the Free State Brewing Company, a recently opened brewpub in Lawrence, Kans. When asked what his favorite beer is he replied, "The one in my stein."

Racking from Carboys to Soda Kegs



any advanced brewers today are using soda kegs or beer kegs for secondary fermentation and aging. One of the nice things about this system is that beer can be transferred from one keg to another with carbon dioxide pressure.

If you are doing your primary fermentation in glass carboys, you should be warned that there is a limit to the pressure the carboy will stand. I for one do not plan to explore this pressure limit, at least not with gas pressure. Therefore, I make the

initial transfer from the carboy by gravity siphon, as shown in Figure 1.

Procedure

- (1) Set the carboy of beer on a table or other elevated object.
- (2) Clean and sterilize the tubing, fittings, racking tube, etc. in a solution of one ounce chlorine bleach per gallon of water. Rinse these items with hot water.
- (3) Clean the neck of the carboy with a new dishcloth soaked in bleach solution, then assemble the equipment as shown in Figure 1.
- (4) Set the keg on the floor and attach a gas connector so the keg will vent during the procedure.
- (5) Attach the liquid connector as shown.

so excess pressure will not build up in the carboy. Be sure to keep the CO₂ running so that airborne contaminants will not be drawn into the carboy, thereby compromising the beer or yeast crop.

- (8) Take specific gravity, residual sugar or other measurements.
- (9) Harvest yeast crop.
- (10) Add kraeusen or cold (dry) hops to keg. This can be done beforehand, but we prefer to do it at this time via medical syringe. The hops are boiled to make "hop tea" that is injected (see "Kraeusening and Cold Hopping Soda Kegs," page 27).

Materials

- (1) Carboy of beer.
- (2) Racking tube with thimble and two-hole stopper or rubber carboy cap.
- (3) CO₂ source with tubing and fittings to connect to two-hole stopper or carboy cap.
- (4) Soda keg with gas and liquid connectors.
- (5) 3/8-inch internal diameter Tygon™ tubing.
- (6) Bleach, new dishcloth.

(6) Turn on the CO₂ source and adjust the regulator so the gas can just be heard blowing at the neck of the carboy.

(7) Start the siphon by gently inserting the two-hole stopper in the carboy neck, or by clamping the rubber carboy cap tightly against the carboy neck with both hands. As soon as the siphon starts to flow, unseat the two-hole stopper or unclamp the carboy cap

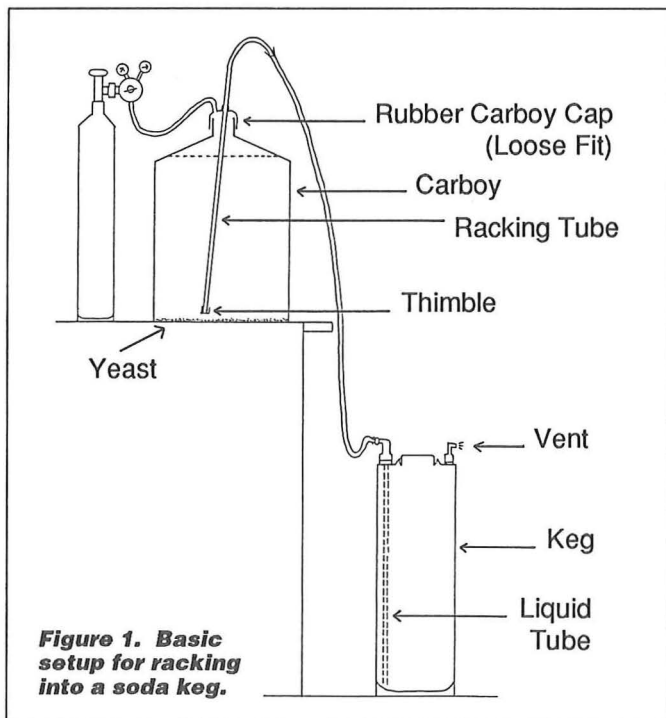


Figure 1. Basic setup for racking into a soda keg.

Cy Martin has his own impressive homebrewery. He started homebrewing in 1958 when he discovered that you could make about two cases of beer for a couple of bucks with bottled water, a can of malt, sugar and a cake of Fleischman's yeast. Since then, Cy has learned how to brew great American-style beer and has an impressive list of award-winning beers to prove it.

CY MARTIN

Kraeusening and Cold Hopping Soda Kegs

Early in our brewing endeavors my brother and I became fanatics about sterile (aseptic) procedure. In other words, after the wort leaves the mash-tun we try not to let it come into contact with anything not biologically clean. That's why we developed the following procedures for kraeusening and dry or cold hopping.

Hops are boiled in a few cups of water for several minutes, killing bacteria and extracting the "goodies" from the hops. Put the boiled hops and water into a small, drip-type coffee maker used only for this purpose, and sparge to obtain "hop tea." If priming sugar (or gyle) is used, it is boiled in the water along with the hops. The resulting hop tea and/or syrups are injected into the keg of beer through the gas connection using a medical syringe, as shown in Figure 1.

For example, we have been using a half ounce of Saaz hop pellets to make tea for five gallons of continental light Pilsener.

We use the Ames Clinitest™ to check our residual sugar. It can be purchased in homebrew shops or your drug store. It is ordinarily used to test for sugar in urine. The kit contains a color comparison chart, a test tube, an eyedropper and a supply of tablets composed of copper sulfate, sodium hydroxide, sodium carbonate and citric acid. There are color charts for both a two-drop and five-drop test. The five-drop test that we use will measure fermentable sugar between "trace" and 2 percent.

CY MARTIN

According to Byron Burch¹, if an American light beer is flat when it is put into the keg, it's going to need about 1 percent of fermentable sugar added to achieve the desired carbonation level. (American beer has about 2.5 to 2.8 volumes CO₂ per volume beer.) A cup of corn sugar added to five gallons of beer will increase its fermentable sugar by 1 percent. [Editor's Note: This will result in a highly carbonated beer that will have to be served at cold temperatures to prevent foaming. If you wish to serve beers above 45 degrees F (7 degrees C), then we recommend that half the amount of priming sugar be used.]

If the test shows 0 percent or "trace," dissolve one cup of corn sugar in a cup of boiling water or hop tea and inject it into a five-gallon keg. If it shows .25 percent, use

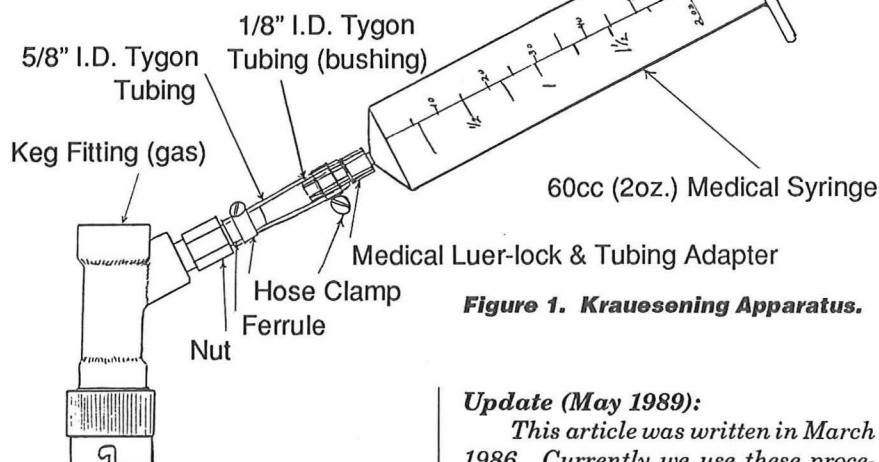


Figure 1. Kraeusening Apparatus.

Update (May 1989):

This article was written in March 1986. Currently we use these procedures only for cold hopping. We have found that during filtration, beer behaves better if it is nearly flat. Also, artificial carbonation seems to "scrub" the beer, giving it a much cleaner nose. We do use the Clinitest™ to determine the state of fermentation.

three-quarters cup. If it shows .50 percent, use one-half cup. If it shows .75 percent, use one-quarter cup. If the test shows greater than 1 percent, you must be prepared to vent CO₂ to prevent overcarbonation.

Materials

- Soda keg
- Gas connector for keg
- Nut and ferrule
- 60cc medical syringe
- Luer or Luer-lock to tubing reducer
- 5/16 inch Tygon™ tubing
- 1/8 inch Tygon™ tubing
- Hose clamps, two for each hose
- Saucepan
- Drip coffeemaker, one or two cup
- Ames Clinitest™ kit

¹Burch, B., *Quickbeer Revisited, zymurgy* (Fall 1985, Vol.8, No. 3) pp. 31-32.

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Water Treatment:

How to Calculate Salt Adjustment

Do you blindly follow recipes that call for gypsum? Have you ever wondered what it does for your pale ales, and why it's not needed for stouts? Was your curiosity piqued by other recipes that call for bizarre minerals such as chalk and Epsom salts? What do these chemicals do for your beer?

Different beer styles have grown up in different areas. The locals will claim that the same style of beer brewed elsewhere doesn't taste the same and is therefore inferior. These claims can be laid to a variety of ingredients—different strains of barley or hops, soil conditions, weather, yeast—and different water.

Water has been called the universal solvent. This name reflects the fact that water can dissolve more compounds than any other solution known. For one example, just look at what it does to the landscape: One can hardly name a more dramatic feature of the Earth than the Grand Canyon. It was created solely by running water.

When water runs across or underneath the land, it dissolves some geologic features. Some of these features erode more quickly than others. For example, limestone is composed chiefly of calcium carbonate, which goes into solution easily. The Carlsbad Caverns were created by water running through a limestone formation.

The water used in each major brewing center flows through its own

unique set of geologic formations. It stands to reason that each center's water has its own unique mineral combination. Over time, the breweries using this water, and their customers, have decided what beer styles best make use of the water's mineral makeup.

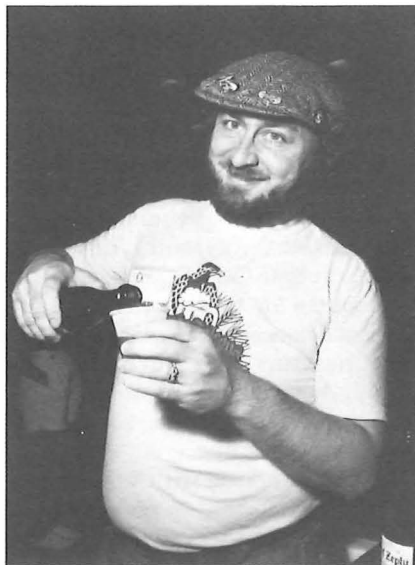
When we try to reproduce famous beer styles we should try to understand the water used as well as understanding the other ingredients, such as barley and hops.

The minerals dissolved in our water affect each stage of the brewing process. Free calcium is necessary in lighter beer mashes to form a

weak acid with the barley, enhancing conversion of starch to sugar. Calcium and magnesium also work with hop resins in the boil to form the hot break, aiding beer clarification. Trace elements are required by our yeast so it can follow normal metabolic pathways and produce a clean-tasting beer. Sulfates and chlorides, although not distinguishable by themselves, add a certain dryness to beer that makes you want to have another, while carbonates can amplify the effect of bittering hops.

We can't understand what adding salts to beer will do if we don't know what is already present in the water we use. Finding out is very easy: Call up your water supplier and ask for a water analysis. The Los Angeles Department of Water and Power and a local independent water supplier, Arrowhead, sent them to me free. The quantities they quote are given in parts per million, or milligrams per liter, which are equivalent measures.

The next difficulty lies in determining what minerals are present in the target water supply. Dave Line, in his *Big Book of Brewing*, shows a table of approximate mineral composition for English-style ales (but beware—his recipes are for *English* gallons and pints); Greg Noonan in *Brewing Lager Beers* does likewise for many lager styles; and Charlie Papazian has a table of brewing water compositions in *The Complete Joy of Home Brewing*. All have long, detailed discussions about mineral



DARRYL RICHMAN

components. If after reading this article you want to know more, here is the start of your reading list.

Once you know what your water has in it and what you want it to have, all you need do is subtract the former from the latter and add to make up the difference, right? Well, maybe. First of all, you must realize that all those tables I mentioned are approximate. Even the legendary Samuel Smith's, whose Old Brewery in Tadcaster lies atop an artesian well in a limestone deposit and which they claim supplies perfect brewing water, adds other minerals such as calcium chloride (I have photographic proof!). So you must take those numbers with *(ahem)* a grain of salt.

sodium. Carbonates (by combining with calcium) can be removed by boiling your water vigorously and racking it off the sediment (which is precipitated calcium carbonate). Dave Line says that all but the last 40 parts per million (ppm) of carbonate can be removed in this way. Other minerals are not easily removed unless you have a reverse osmosis water purifier at your disposal, so you may have to make do or find another water source (that's why I asked both water suppliers).

On To The Minerals

As brewers, the ions we are most concerned with are: calcium, magne-

of completely soft water to achieve this level.

Also notice that I've just quoted you a figure *by weight*, not by volume. Like measuring flour, you must be aware of whether you have packed it tightly into the cup or not. This is because the physical nature of flour is such that it doesn't naturally compress into the smallest space it can occupy. Mineral salts behave the same way. Dave Line does give volume approximations, but you should be aware that they can vary dramatically in actual content. Greg Noonan gives an example of an experiment he carried out to compare how much salt he could get into a particular volume. If you are going to use volumes, you must try to be consistent.

Table 1 shows the breakdown of each compound into its constituent ions. For simplicity, the next column shows how many ppm of each ion are added when one gram of the compound is added to five gallons of water.

You may have noticed that the percentages of the last two compounds don't add up to 100 percent. When you buy these salts as gypsum and Epsom salts they contain some water in their crystals (two molecules for gypsum and seven for Epsom salts) but we already have a lot of water.

Now you can construct a table like Table 2 to figure the salts you need to add to achieve the water you want. Begin by writing out the ions and the values from your water report. Write your target water's values next (I targeted the water of Munich, West Germany) and subtract them from your water. Experiment by adding salts to achieve a total that matches this result.

Our goal here is to add salts to closely match the "Difference" column. The most important goal is a close match on calcium, because that is what drives many of the reactions in mashing, boiling and fermenting.

To get this needed calcium, you can choose from three salts. But there is a problem with using calcium chloride because we already have too much chloride. We're not too high in terms of absolute quantity, so as long

Table 1. Breakdown of Mineral Compounds into Constituent Ions

Compound	Ions	% Composition by weight	1 gm/5 gal (ppm)
Calcium carbonate (chalk)	Ca	40.0 %	21.2
	CO ₃	60.0	31.7
Calcium chloride	Ca	36.1	19.1
	Cl ₂	63.9	33.8
Calcium sulfate (gypsum)	Ca	23.3	12.3
	SO ₄	55.8	29.5
Magnesium sulfate (Epsom salts)	Mg	9.9	5.2
	SO ₄	39.0	20.6

Also, you couldn't match those numbers if you wanted to. The salts we have available are made of complementary ions. The gypsum, which is calcium sulfate you add to your brewpot, is locked into a fixed ratio of calcium and sulfate ions. If your water has plenty of sulfate but needs more calcium you are out of luck. Selecting the proper salts is a matter of compromise.

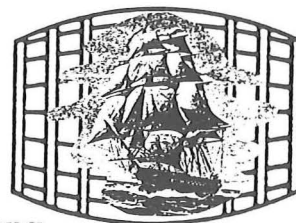
The final problem is that you may already have too much of some or all of the ions you want. Using a home water softener may actually increase this problem because most of them work by trading the calcium for sodium ions. You want some calcium, but you rarely need to add any

sium, chloride, carbonate and sulfate. These are available as compounds: calcium chloride (CaCl₂), calcium carbonate (CaCO₃, chalk), calcium sulfate (CaSO₄, gypsum), and magnesium sulfate (MgSO₄, Epsom salts). One source for these is the company Tri-Ess Sciences, Inc., located at 1020 W. Chestnut St., Burbank, CA, 91506. As you will see, the quantities involved are miniscule, so a small bottle will work fine.

When working with these materials it is important to realize that a little goes a long way. If the hardest water in the driest pale ale has 250 ppm of calcium, it only takes 16 grams (slightly more than 1/2 ounce) of gypsum in five gallons



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as we don't add more we'll be all right. This eliminates one possible salt. If we add gypsum (calcium sulfate) to get our calcium, we would be adding a great deal of the sulfate ion as well—much more than we need. So we choose three grams of chalk (calcium carbonate), which also happen to neatly fill our requirements for the carbonate ion. A gram of Epsom salts gives us both the magnesium, although a bit under, and sulfate, a bit over.

As you can see, these numbers are somewhat of a compromise, although for the minerals present in large quantities we are very close. Our calcium is within 9 percent and the carbonates are within 5 percent of the targets. We could have added more magnesium sulfate to more closely match the magnesium, but this would have thrown the sulfates further off.

So why is this mythical water, which we have spent much space and time calculating, any better than just going with what comes out of the tap?

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Table 2. Figuring the Salts Needed to Match Target Water

Ion	My Water	Target Water (Munich)	Difference	Add CaCO ₃ 3 gm	CaCl ₂ 0 gm	CaSO ₄ 0 gm	MgSO ₄ 1 gm	Total Ions
Ca	17.7	75	57.3	63.6				81.3
Mg	4.7	18	13.3				5.2	9.9
CO ₃	47.4	150	102.6	95.7				143.1
Cl ₂	8.1	2	-6.1					8.1
SO ₄	0.0	10	10.0				20.6	20.6



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First of all, just looking at the numbers explains a lot about the kinds of beer produced in the Munich area. Their beers are colorful—from Bocks and Doppelbocks through Märzens and Dunkels to the Dunkel Weizens, they are all darker beers. Perhaps this stems from the fact that, to obtain the proper level of acidity, more dark malt is needed to balance out the carbonate water. Carbonates, as mentioned above, combine with calcium and precipitate out when heated. Without calcium, the barley malt does not form a weak acidic environment; the mash is left strongly alkaline, which is unfavorable for the enzymes. Dark malts come to the rescue because they add their own acidity and stabilize this tendency toward alkalinity.

As you can see, understanding an area's water can help explain the local brewing style. Walking a mile in the local brewer's galoshes can help you produce stylistically correct beers and understand why they developed.

© 1988, Darryl Richman. *Adapted from an article originally appearing in Brews & News, newsletter of The Maltose Falcons Home Brewing Society, Woodland Hills, Calif.*

Darryl Richman is happy to call himself a Maltose Falcon. He has been the Brewmaster at Ye Olde Craftie Foxxe and Der Schlaue Fuchs Altbrauerei, his personal breweries, since their founding in 1986. He works nights and weekends as a computer programmer to make ends meet, and occasionally has time to see his wife.

FOR THE BEGINNER

MONICA FAVRE
TRACY LOYSEN

An Easy Guide to Recipe Formulation

Authors' note: We're writing for those brewers who want to do more than follow the directions on a can, but who rely on basic brewing techniques such as boiling on the stove, straining out certain ingredients, transferring wort to a carboy, and fermenting at room temperature. Accordingly, we will direct our discussions to people who brew ales with malt extract (or dried malt) and additional ingredients, such as adjunct malts and hops, that can be thrown into the brew kettle without any special treatment.



It was time to brew again. Winter was approaching and we wanted to make a stout for the holiday season. But where to begin?

First we had to clarify what we liked in a stout. After some thought, we decided to create a brew that was not too bitter, but still dark and rich in flavor.

As beginners we had little idea of what ingredients and procedures would result in these characteristics. What makes a beer dark? What gives it body? What gives it bitterness? We looked up the style definition for some clues. It told us about the average percent alcohol, color, and general flavor characteristics, all of which were interesting but not helpful. Of course, we knew we could simply follow someone else's recipe, or ask our local brewing professor to help us write one, but we wanted to

understand how to create a specific beer style to match our own unique specifications.

Next, we tried looking at other people's recipes. This was a useful process. Though the recipes varied in many ways, we saw that certain ingredients showed up with regularity: dark malt extract, roasted barley and black patent malt. We formulated our preliminary recipe with these common ingredients, and decided on quantities using intuition and by averaging the amounts that other brewers used in their recipes.

Armed with our painstakingly created recipe we went to our local homebrew shop. The owner, however, didn't have all our ingredients. "Don't worry," he said, "use these instead." He poured them into plastic bags without measuring the specific amounts we had carefully determined. We left his store feeling that we had the makings for a good brew, but one that was not our own. We were back where we started, with someone else's recipe. We realized that, without understanding why we needed certain ingredients and what they did, we had no idea how last-minute modifications would influence our end product. We wanted to be better informed.

In our search for information we found a variety of good sources, including: two one-page freebies from the AHA called "How to Use Specialty Malts" and "The Zymurgist's Guide to Hops"; the 1986 malt extract special

issue of *zymurgy* (Vol. 9, No. 4); charts in *The Complete Joy of Home Brewing*; winning recipes; and other, more experienced homebrewers. We recommend exploring any and all of these avenues. (We keep copies of stuff like this, as well as blow-by-blow accounts of our brewing endeavors, in our handy brewing notebook).

Through our reading and conversations, we discovered information about the basic ingredients of beer that will be helpful to you in your recipe formulation.

Color, body and maltiness are derived from grains. Darker malts will produce darker beers. In small quantities grains will affect color and add little or no flavor. Your brew's color will darken, flavors will become evident and the contribution to body will increase as you use larger quantities. Body and maltiness are created from malts with sugars. Most of the sugars in roasted barley and black patent malt have been burnt out, so these grains do not contribute significantly to body. The AHA's guide to malts (mentioned earlier) outlines what color and flavor will result from specific amounts of the specialty grains.

Maltiness and body describe different things—one refers to taste and the other to mouthfeel—but we have combined them into one category for ease of understanding and use.

The hop amounts suggested are based on hops of average bitterness. We recommend that beginners stay

away from the very bitter varieties because it is easy to add too much. The use of medium-bitterness hops will give you more room for error. Five commonly available varieties in this range are Willamette, Tettnanger, Cascade, Styrian Goldings and Hallertauer. For further information on differences between hop varieties, consult the "Zymurgist's Guide to Hops."

As a beginner, how do you assimilate all this information into something you can use? We believe that you can write your own recipe by using the chart on page 35 and following the steps we've outlined below.

Before you formulate your recipe, a good first step is to list the general characteristics of the style you wish to brew. Then refine the list by considering which characteristics you like

and want to emphasize, which you want to tone down, and any other special features you want to add. We have found it useful to think in terms of three dimensions along which any beer can vary: color, body/maltiness and bitterness. Remember, you're brewing for you! Unless you are brewing specifically for a competition, there is no need to adhere strictly to what someone else says your beer should be like.

With your list and the chart in hand, you are now ready to write your recipe. We will take you through the steps of formulating the stout we described earlier, as an example of how to use the chart. We can describe the beer we want as dark-colored, medium- to full-bodied, with medium to high maltiness and low to medium bitterness.

- **Color.** Knowing that we want a dark color, and that color comes from malt, we'll choose the high end of the base malt range. In addition, we'll choose enough black malt (one-half pound) to add to the color without adding a charcoal bitterness.

- **Body/Maltiness.** We want medium to high for both body and maltiness. The adjuncts we can pick from, according to the chart, are chocolate, roasted barley, black patent and crystal malts. Of these, only crystal malt contributes significantly to body. So, we want a relatively high amount of crystal malt. However, we cannot determine the specific quantity at this stage.

- **Bitterness.** We want low to medium bitterness. Bitterness is created by both hops and some dark malts. Since we don't want a lot of bitterness we will only use a small quantity of roasted barley (one-third pound). We'll use two ounces of hops, the lower end of the range, to keep the bitterness down.

Having determined the amounts of roasted and black malts, we can figure the amount of crystal malt to use. The total amount of dark grain adjuncts should be around 1 1/3 pounds, leaving us with one-half pound for crystal malt.

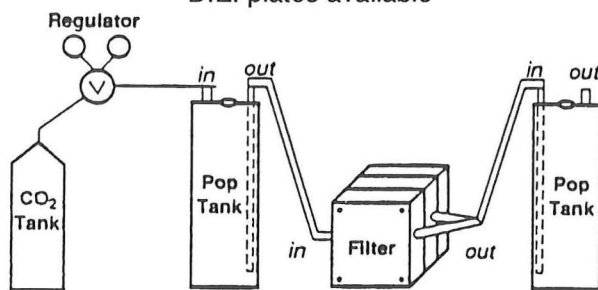
The completed recipe for a five-gallon batch looks something like this:

6 1/2 pounds dark malt extract
1/2 pound black patent malt

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Guidelines for Beginning Recipe Formulation (for 5-gallon batch)

STYLE	CHARACTERISTICS				INGREDIENTS	
	identifying characteristic	color	body	multi-ness	lbs. malts	oz. boiling hops*
Barley Wine	strong, high alcohol (a lot of malt)	copper to dark brown	full	high	base: 8 - 10 light adjuncts: black, chocolate or combination — < 1/3 for color crystal — no amount limit	4 - 6
Brown Ale	brown color, sweet	dark brown	med. to full	low	base: 5 - 6 light or amber adjuncts: chocolate — > 1/3 black, roasted or combo — < 1/4 for color crystal — 1/4-3/4 for color, body, sweetness	1 - 1.5
Pale Ale	hop bitterness	light to copper	low to med.	high	base: 6 - 7 light or amber adjuncts: crystal — 1/2-1 optional for color, body, sweetness choc., roasted or black — < 1/8 optional for color	2 - 3
Porter	dark color, no burnt flavor	dark, almost black	med.	high	base: 7 - 8 lbs. dark adjuncts: black — < 1/2 for color, 1/2-2/3 for taste roasted — < 1/4 chocolate — < 1 crystal — 1/4-1 for color, body, sweetness	1.5 - 2
Stout	roasted barley character	dark brown to black	med. to full	high	base: 6 - 6.5 dark adjuncts: black — < 1/2 for color, 1/2-2/3 for taste roasted — 1/3-1 chocolate — optional, < 2/3 crystal — 1/3-1 for color, body, sweetness (Use up to a total of 1 1/3 pounds dark grains in total adjuncts)	2 - 2.5

*The amounts listed refer to fresh, whole hops of average bitterness (4 to 6% alpha acid)

Adjunct Malt Characteristics

black: dry, burnt, charcoal bitterness

crystal: sweet, amber color, body

roasted barley: coffee-like bitterness, roasted flavor

chocolate: dark color, toasted flavor

Malt Extract Conversions

5 lbs. *Very Dark Extract* = 5 lbs. light or amber malt extract + 2 cups roasted, black or chocolate

5 lbs. *Amber Extract* = 5 lbs. light malt extract + 2 cups crystal = 5 lbs. light malt extract + 1/2 cup black, roasted or chocolate

5 lbs. *Medium Brown Extract* = 5 lbs. light or amber malt extract + 1 cup black, roasted or chocolate malts + (optional) 1 or 2 cups crystal

1/2 pound crystal malt

1/3 pound roasted barley

2 ounces hops (choose type by personal taste) for boiling

Of course there are additional ingredients you can add that aren't specific to any beer style, such as finishing hops and spices. You can experiment with these as the mood strikes you.

The three dimensions we present in the chart are sufficient for tailoring a beer to your specifications, with two exceptions. High alcohol content is a major distinguishing characteristic of barley wine. It results from brewing

with a lot of malt; the more malt you use, the higher your alcohol percentage or strength will be. A special feature of some pale ales is "dryness," which results from brewing with certain types of water and/or from brewing with a highly attenuating yeast. If you like this character in beer, you can modify your water by adding two to four teaspoons of gypsum or choose an appropriate yeast strain. However, these steps are not necessary to create a great pale ale.

Part of the fun in homebrewing is experimenting. It's even more fun (and more relaxing) when you have a

general idea of what you're experimenting with. In this article, as well as the next three we write, we want to give you tools with which you can teach yourself. Tune in next spring for the lowdown on hops. Same bat channel, same bat time.

Monica Favre and Tracy Loysen (Travre Brewing Co.) are former AHA staff members. They hope to brew Belgian beers and sour mash beers in the future. They don't want to discuss any personal information as it is all rather vague, contradictory and incriminating.

WINNERS CIRCLE

DAVID EDGAR



Now that the depths of winter are upon us, it's high time to plan for spring. Nothing says springtime like a good bock beer. Why not take advantage of the good brewing weather now, so when the sun shines brighter and the days get noticeably longer you will have the fruits of your labor ripe for the picking.

Following are eight recipes recognized as second or third best in the nation in their respective categories at the American Homebrewers Association's 1989 National Competition. If you get started soon, you'll have a delicious Altbier to enjoy for the first softball game of the year or a refreshing, fruity pale ale to savor on the first day of daylight-saving time. Cheers!

BOCK

Second Place

Charles Lambert
Romulus, Michigan
"O-So-Bock"
Weizen Bock

Note: This five-gallon batch of beer was brewed with a starter of three gallons of runoff from a 10-gallon all-grain batch. Below is the all-grain recipe, followed by the list of ingredients added to the runoff to create the final five-gallon batch:

Ingredients for 10 gallons

10 pounds Briess pale malt
10 pounds Briess wheat malt
1/2 pound Briess crystal malt
5 ounces Briess chocolate malt
3 1/2 ounces Briess black patent malt

For a copy of "Outline for Intermediate Brewing," see the "Free from the AHA" ad, page 11.

2 1/2 ounces Hallertauer hops (boil)
1 ounce Hallertauer hops (finish)
1 teaspoon Irish moss (last 15 minutes)

- Original specific gravity: n/a

Ingredients for 5 gallons

(Added to 3 gallons runoff from above recipe)

7 pounds amber malt extract
7 pounds Briess wheat extract
2 ounces Cascade hop pellets (boil)
1/2 ounces Cascade hop pellets (finish)

- Original specific gravity: 1.068
- Terminal specific gravity: n/a
- Age when judged (since bottling): 4 months
- Boiling time: 90 minutes
- Duration of fermentation: 28 days
- Approximate fermentation temperature: 58 degrees F
- Secondary fermentation: 14 days
- Type of fermenter: plastic primary, glass secondary

Brewer's specifics

Mash Recipe: One-step infusion. Grains mashed in at 170-degrees F (77-degrees C) water, brought down to 154 degrees F (68 degrees C) and held 1 1/4 hours, sparged at 170 degrees F (77 degrees C).

Judges' comments

"Very malty, very slight lemony aroma—OK. No off-aromas. Color slightly dark; clarity OK. Lacks head retention. Caramel, malty flavor, yet retains a dryness. Well-balanced. Could use more carbonation, but a good example of style."

"Clean, slightly roasted, wheat aroma—neat! Clear, a little too dark; very active head, thin head. Light-bodied, well-balanced flavor with a hint of dark malt. Low carbonation; alcoholic. A nice, wheaty, alcoholic, well-balanced, clean, drinkable brew. Nice job!"

"Aroma—a little clove, lemon. Appearance—a little dark, too flat. Flavor—nice sweetness, good bitterness, dryness. Overall—I really enjoy it."

Shelby Meyer:

1989 Meadmaker of the Year

Shelby Meyer got the inspiration for his 1989 award-winning Nogales Mead from a suitably antiquated source. The Tucson, Ariz., brewer was reading some old folk recipes from *Five Thousand Receipts in all the Useful Domestic Arts* (published in 1829) and *The London Art of Cookery and Housekeeper's Complete Assistant-Seventh Edition* (published in 1792). The recipes for walnut mead ("nogales" is Spanish for walnut) didn't specify whether the required walnut leaves should be fresh or dried. Meyer recalls wondering, "Where do you get walnut leaves—go out in the woods and look? I wouldn't know a walnut tree if I tripped over one." Finally, he found some dried leaves at a local health food store.

Meyer started brewing in 1972, while living in Minnesota. He had a huge basement with a "rock solid" temperature—perfect for brewing. Then he moved to Arizona. The temperature in Arizona can vary as much as 30 degrees F during the day, and he doesn't know anyone with a



basement. He went through a two- or three-year dry spell after his move. When asked what got him brewing again, Meyer replied, "I was terribly thirsty." He saw an advertisement for the Old Pueblo Homebrewers brewing club in one of the local brew shops, and has been brewing steadily for two years since joining. His career as a meadmaker started when 10 or 12 of his friends decided he was the best qualified to teach an informal class on the subject. Three of that original group still brew together, he and his friends Gary Kaufmann and Tom Purington. They call themselves "Los Borrachos." When asked what that means, Meyer replied, "Well, depending on who you ask, it means either 'The Esteemed Friends' or 'The Drunks.'"

The 1989 AHA conference was Meyer's first competition. He entered at the prodding of his two friends. "Sometimes we had arguments over which one to enter, because you can only enter one," he remembers. They have brewed 30 or 40 meads over the last two years. Many were one-gallon experimental batches using everything from peas to black currants. Meyer described the black currant mead as "great," and said the worst mead resulted from a box of oranges they got free. "It made five gallons of truly mediocre swill." But no brew was so strange that it was poured out.

Meyer recommends Charlie Papazian's addendum in the back of *Brewing Mead* by Lt. Colonel Robert Gayre as the best guide to meadmaking he has ever found. When asked about the waiting time on mead, he replies that he always tastes it during bottling, and then tries to hold out for six months before opening the bottles. He would like to wait five years before opening some. "That's happened to a few people in this area. They've found a bottle in the back of the closet that has been there for five years and it's just awesome," he says.

Meyer has no set plans as far as his future brewing is concerned. He says he is always learning. "With brewing, you never get to the point where you say, 'Well, I've mastered that one. Now I'm going to try stained glass.'"

LAURA ALLBRITTEN

Third Place Peter Jelenik Portland, Oregon "No Stupid Name" Helles Bock

Ingredients for 5 gallons

- 11 pounds Klages malt
- 2 pounds German Munich malt
- 1 pound dextrin malt
- 1/3 pound crystal malt
- 1 1/2 ounces Hallertauer (boil)
- 1/2 ounce Hallertauer (finish)
- 2 teaspoons gypsum
- Wyeast No. 2042 liquid yeast

- Original specific gravity: 1.067
- Terminal specific gravity: 1.010
- Age when judged (since bottling): 1 1/2 months

- Boiling time: 90 minutes
- Duration of fermentation: four weeks
- Approximate temperature of fermentation: 55 degrees F (12.7 degrees C)
- Secondary fermentation: two months
- Type of fermenter: glass

Brewer's specifics

Two-step mash; 120 and 156 degrees F (48.8 and 68.8 degrees C). Carbonated by natural kraeusen.

Judges' comments

"Very malty aroma with hint of DMS; otherwise clean. Color pretty much in line for a Helles, but leans toward 'Vienna.' Could be more golden. Thin, retentive head with small-bubble beading. Very clear. Malty flavor, good balance, noticeable alcohol. Slightly fruity, sweet, full palate. A tad caramelly, with dryish finish—nice. Good example of style, just lacks some of the snap and finesse that comes from extended German lagering."

"Good malt aroma, light hops, no off-odors. Good color and clarity; fair head retention. Malty sweet; some sweetness comes from a fruity character. Slight phenolic-bitter aftertaste. Perhaps tannins from oversparge?"

"Aroma—pleasant. Appearance—very appealing. Flavor—enjoyable. Overall—satisfied."

MUNICH

Second Place

David Miller

St. Louis, Missouri

"Helles"

Ingredients for 5 gallons

- 5 3/4 pounds two-row lager malt
- 1 pound cara-pils malt
- 1/4 pound Munich malt (10 degrees Lovibond)
- 1 3/4 ounces Hallertauer (boil)
- 1 3/4 ounces Hallertauer hops (45 minutes before end) lactic acid
- Wyeast No. 2007 St. Louis Lager liquid yeast
- 3/4 cup corn sugar to prime

- Original specific gravity: 1.045
- Terminal specific gravity: 1.013
- Age when judged (since bottling): four months
- Boiling time: 75 minutes
- Duration of fermentation: three weeks
- Approximate temperature of fermentation: 50 to 55 degrees F (10 to 12.5 degrees C)
- Secondary fermentation: one week
- Type of fermenter: glass

Brewer's specifics

Sparge water acidified to pH 5.7 with lactic acid.

Mash: protein rest 30 minutes at 131 degrees F (55 degrees C); starch rest 60 minutes at 155 to 149 degrees F (68 to 65 degrees C); mash-out five minutes at 168 degrees F (75.5 degrees C). Sparge: five gallons water at 168 to 162 degrees F (75.5 to 72 degrees C).

Judges' comments

"Color is very light, almost yellow. Could use a more distinct hop flavor. Needs more carbonation; pleasant taste."

PALE ALE

Subcategory 8a—Classic Pale Ale

First Place

Charles Milan

Baton Rouge, Louisiana

"Half and Half Ale"

Ingredients for 6 gallons

- 3 1/3 pounds Munton & Fison light malt extract
- 1 pound Munton & Fison light dry malt extract

- 4 pounds Munton & Fison pale malt
- 1/2 pound Munton & Fison crystal malt
- 1/2 pound Williams Munich malt
- 1 3/4 ounces Northern Brewer hops (60 minutes)
- 1/2 ounce Saaz hops (10 minutes)
- 1/2 ounce Saaz hops (30 minutes, after boil)
- 1 teaspoon Irish moss (10 minutes of boil)
- 2 teaspoons gypsum
- Williams English Brewery yeast
- 1 1/4 cups amber diastatic malt extract to prime

- Original specific gravity: 1.052
- Terminal specific gravity: 1.017
- Age when judged (since bottling): three months
- Boiling time: 60 minutes
- Duration of fermentation: two weeks
- Approximate temperature of fermentation: 70 degrees F (21 degrees C)
- Secondary fermentation: 12 days
- Type of fermenter: plastic primary, glass secondary

Brewer's specifics

Infusion mash: 150 degrees F to 160 degrees F (65.5 to 71 degrees C) for 1 1/2 hours. Sparge with 3 1/2 gallons 175 degree F (79.5 degrees C) water.

Judges' comments

"Aroma—wonderful. Appearance—good. Flavor—well-balanced. Overall—excellent brew; congratulations!"

"Aroma—estery. Appearance—appropriate. Flavor—good overall; balanced. Overall—very drinkable."

Subcategory 8b — India Pale Ale

First Place

James T. Reese

Amarillo, Texas

"Diving Duck Ale"

Ingredients for 5 gallons

- 3 1/3 pounds John Bull hopped malt extract
- 3 pounds Cooper's Bitter kit
- 2 pounds Brewmaster light dry malt extract
- 1 ounce Willamette hops (60 minutes)
- 1/2 ounce Kent Goldings hops (finish)
- 1 ounce Kent Goldings hops (dry hop three minutes)
- 4 ounces maltodextrin
- 1/2 teaspoon Irish moss
- Wyeast No. 1056 Chico Ale liquid yeast
- 3/4 cup corn sugar to prime

- Original specific gravity: not given
- Terminal specific gravity: not given
- Age when judged (since bottling): 2 1/2 months
- Boiling time: 60 minutes
- Duration of fermentation: four weeks
- Approximate temperature of fermentation: 65 degrees F (18.5 degrees C)
- Secondary fermentation: none
- Type of fermenter: glass

Judges' comments

"Aroma—robust. Appearance—clear. Flavor—robust; good balance. Overall—this is good!"

"Aroma—appropriate. Appearance—nice. Flavor—very good balance. Overall—very drinkable; good overall."

HERB BEER

Second Place

David J. Perlman

Philadelphia, Pennsylvania

"Wissahickon Holiday Spiced Ale"

Ingredients for 5 gallons

- 3 1/2 pounds John Bull amber malt extract
- 3 1/3 pounds Muntion & Fison light malt extract
- 3/4 pound light dry malt extract
- 1 1/2 ounces Cascade hops (65 minutes)
- 1 ounce Bullion hops (65 minutes)
- 1 ounce Kent Goldings hop pellets (dry hop)
- 1 pound dry maltodextrin (65 minutes)
- 2 ounces grated ginger (25 minutes)
- 2 teaspoons cinnamon (25 minutes)
- 1 teaspoon ground coriander (25 minutes)
- 7 small cloves (25 minutes)
- Wyeast No. 1098 British Ale liquid yeast
- 3/4 cup corn sugar

- Original specific gravity: 1.057
- Terminal specific gravity: 1.025
- Age when judged (since bottling): two months
- Boiling time: 65 minutes
- Duration of fermentation: two weeks
- Approximate temperature of fermentation: 70 degrees F (21 degrees C)
- Secondary fermentation: none
- Type of fermenter: glass

Brewer's specifics

Add ginger, cinnamon, coriander and cloves to last 25 minutes of boil.

Judges' comments

"Fresh aroma; ginger predominates a little, but nice blend. Nice light amber color, clear, good head retention. Very nice flavor; well-blended. An excellent, well-made beer."

"Smells great; all spices are quite apparent. 'Sounds' good too. Slightly cloudy but OK for an ale. Beautiful beading in head; creamy, good color. Refreshing—cloves really kick in. Maybe ease up on them a little to allow other spices to be perceived. Wonderful Christmas beer!"

"Aroma—very pleasant and fresh. Appearance—great head and color. Flavor—tastes great but expected more body. Overall—great job."

Third Place

John Masters

South Lake Tahoe, California

"Christmas Ale"

Ingredients for 5 gallons

- 7 pounds light dry malt extract
- 1/2 pound crystal malt
- 1/8 pound chocolate malt
- 1/8 pound black patent malt
- 2 ounces Cascade hops (45 minutes)
- 1/2 ounce Cascade hops (two minutes)
- 1 pound honey
- 1 ounce grated ginger root
- 1 6-inch cinnamon stick
- grated peel of 5 oranges
- 1 packet Red Star ale yeast
- 1 cup corn sugar to prime

- Original specific gravity: 1.056
- Terminal specific gravity: 1.016
- Age when judged (since bottling): three months
- Boiling time: 60 minutes
- Duration of fermentation: three weeks
- Approximate temperature of fermentation: 65 degrees F (18.5 degrees C)
- Secondary fermentation: two weeks
- Type of fermenter: plastic primary, glass secondary

Brewer's specifics

Add grains and boil for five minutes; remove. Boil malt and honey 15 minutes. Add two ounces Cascade hops, boil 45 minutes. Add spices and boil 10 minutes. Add 1/2 ounce Cascade hops for last two minutes.

Judges' comments

"Lovely spice aroma—smells like a kitchen when someone's baking—mmm. Orange subtle but there; the honey mellows it. Beautifully clear; amber golden color. Head laces nicely. Flavor predominated by spice and honey and orange; could use more malt. Tart and puckery. Reminds me of Anchor Christmas Ale! Nice body. After-taste sort of drops out at end."

"A very nice aroma blends the 'special' ingredients; orange comes first. Nice yellow color, clear; fine bubbles and head. Very well-balanced, smooth; the orange flavor stands out slightly but everything is well-blended. A very well-made beer, cleanly brewed. Would make an excellent, refreshing, summer drink, well-chilled."

ALT

Second Place

George Mika

Laurel, Maryland

"Alter Hickory"

Ingredients for 5 gallons

- 5 pounds Munich malt
- 3 pounds Vienna malt

WORLD BEER REVIEW

The Beer Connoisseur's Newsletter

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beer. Won't you join us?

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sic brands, bad brands, new mi-
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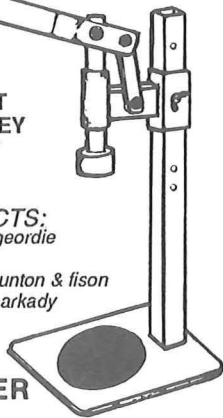
- AMERICAN OR CANADIAN AND
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- 1/2 pound crystal malt
- 1 ounce Hallertauer hop pellets (90 minutes)
- 1/2 ounce Tettnanger hop pellets (20 minutes)
- 1/2 ounce Hallertauer hops (end of boil)
- Wyeast German Ale liquid yeast
- 3/4 cup corn sugar to prime

- Original specific gravity: 1.050
- Terminal specific gravity: 1.015
- Age when judged (since bottling): 1 1/2 months
- Boiling time: 90 minutes
- Duration of fermentation: two weeks
- Approximate temperature of fermentation: upper 60s in degrees F (19.5 to 20.5 degrees C)
- Secondary fermentation: one week
- Type of fermenter: glass

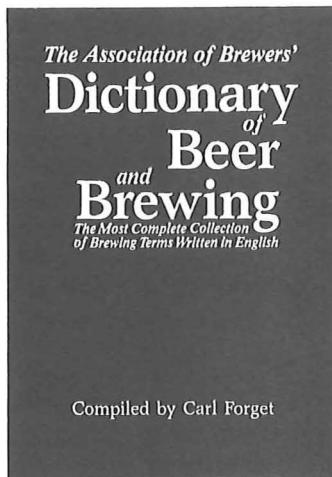
Judges' comments

"Subtle aroma; no inappropriate odors. Good color, well-carbonated. Good clarity, good head retention. Too much hops. Smooth. Bitter aftertaste, but otherwise very good. Great appearance, nice flavor."

"Mild hop aroma with solvent-alcohol background. Dark amber color, good clarity, OK head. Malty flavor with some hop balance. Alcoholic finish. A fairly clean beer, but needs more body and less alcohol. Also needs more German hop character to balance malt."

It's what you don't know that's really, really interesting.

The Association of Brewers' DICTIONARY OF BEER AND BREWING by Carl Forget



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DIC89

WORLD OF WORTS

CHARLIE PAPAZIAN

Tempestuous Pilsener

Sometimes, just sometimes, I wonder about myself. I mean, a promise is a promise, especially when you're promising beer. That's exactly what I did this past summer. "Sure, no problem. You can count on me for five gallons of homebrew for the club barbecue. No problem."

I wanted to brew something refreshing, cold and relatively light, but with a German-style lager character. First problem (well, sort of): I didn't have enough time to brew because I was traveling so much. Second problem (or so I almost believed): It's too warm in my basement at 68 degrees F (20 degrees C) in the summertime to brew a lager. Third problem: The fantastic summer weather was more appropriate to swinging in my hammock and drinking than brewing.

But a promise is a promise. I snuck in a batch of Tempestuous Pilsener quickly one evening the night before I was to go off on a business trip. I packed while the wort was boiling to make the best use of my time and took quick sips of my "Tits Up in the Mud" pale ale between hoppings.

I made a point of hopping at various stages with American-grown hops of German origin. That's the best I could do without the authentic character of real European-grown hops.

I used a liquid lager yeast culture called "American Pilsner." It seemed to do fine in the relatively warmer temperatures and did not produce excessively fruity esters.

Time caught up with me. It was two days before the barbecue and my beer was still in the carboy and not yet clear. I eyed a filtration system that I had been sent but never used. It was time for emergency measures. It worked! The beer was filtered, chilled and then artificially carbonated in

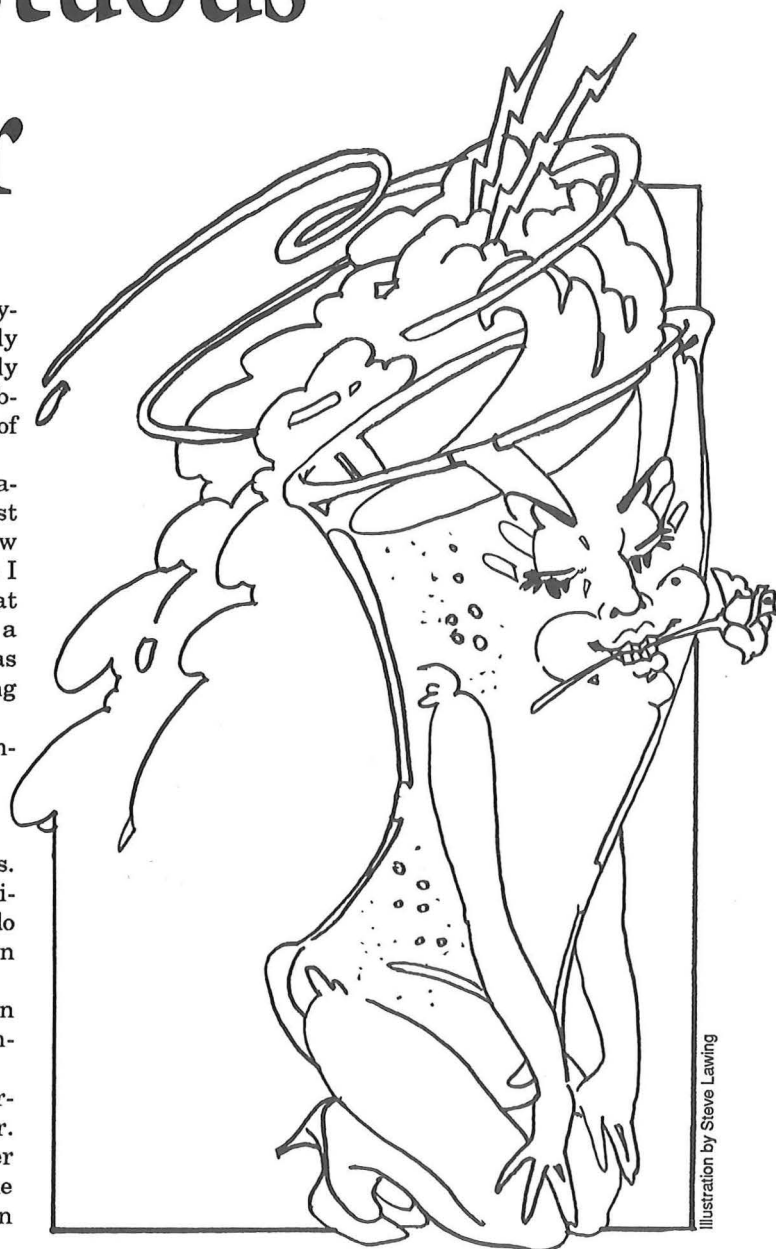


Illustration by Steve Lawing

24 hours—perfect for a summer's outing up on Gold Hill with a fine bunch of homebrewers.

I liked it. And now that it's the cold season, there's no excuse not to try this simple recipe for a hoppy, German Pilsener-style lager.

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

Tempestuous Pilsener

Recipe for five gallons

- 5 pounds Munton & Fison plain light dried malt extract
- 5 Homebrew Bittering Units (I used 1/2 ounce Saaz, 1/2 ounce Hallertauer and 1/4 ounce Perle hops) boiling hops
- 3/4 ounce Saaz hops for flavor
- 1/3 ounce Perle hops for flavor
- 1/2 ounce Hallertauer hops for aroma
- 1/2 ounce Perle hops for aroma
- cultured Wyeast "American Pilsener" lager yeast
- 3/4 cup sugar or 1 1/4 cup dry malt extract for bottling

• Original Gravity : 1.036 to 1.040

• Final Gravity: 1.006 to 1.010

Prepare yeast by culturing in foil bag as instructed, then add this yeast supply to 20 to 32 ounces of sterile wort and let ferment for two to four days before pitching the yeast into the beer.

On brewing day add the malt extract and boiling hops to 2 gallons of water and boil for 40 minutes. Add flavor hops and boil for another 20 minutes. Then add aroma hops for the final two minutes.

Strain and sparge hot wort into a clean, sanitized fermenter that already has 2 gallons of cold water. Make up to 5 gallons. Add yeast when cooled to about 60 to 70 degrees F (15.5 to 21 degrees C). When fermentation begins, cool the fermentation to 55 degrees F (12.5 degrees C) if you can, but don't worry.

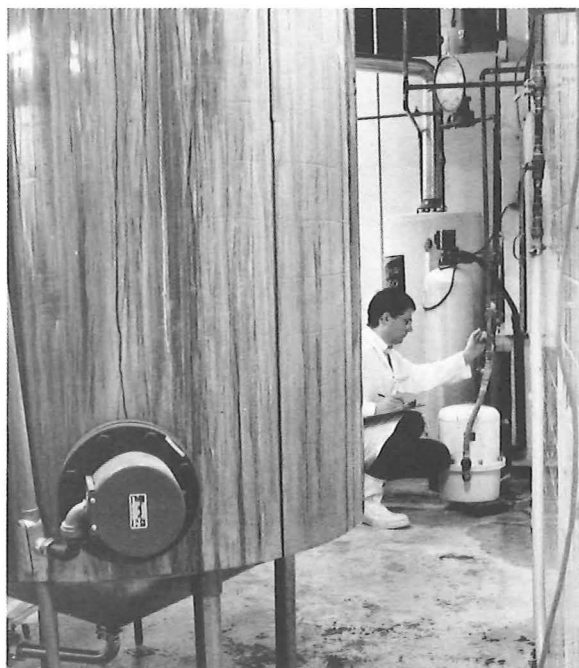
When fermentation is complete, boil corn sugar or malt extract in 1 1/2 cups of water for 10 minutes. Add as priming sugar and bottle. Drink when ready, in about two to four weeks.

HOMEBREW 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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DEAR PROFESSOR

PROFESSOR SURFEIT

From Keg to Bottle

Dear Professor,

Recently, a letter in your column addressed a concern of mine. I have just kegged my first batch using the Cornelius system. I have had enough of the bottling routine. However, I would like a few bottles from my kegs to enter in competitions. No one seems to know how to produce sufficient carbonation. Surely, in your infinite wisdom, you must have found a solution to this question. Your advice will be greatly appreciated.

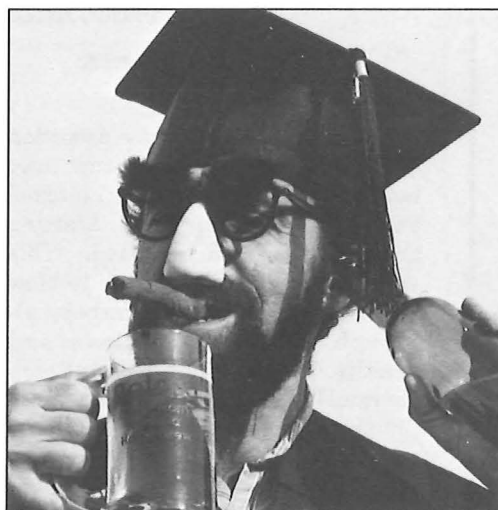
Hops to you,
Michael Weeks
Charlotte, North Carolina

Dear Michael,

Bottling can be done from a keg easily by chilling the keg beer as cold as you can get it without freezing, then dispensing with about five pounds of CO₂ pressure into a sanitized, chilled bottle and capping immediately. You do lose some carbonation but you still can win competitions using this method.

Another, more sophisticated method is to bottle your beer using a counterpressure system. We'll have an article in the next zymurgy on this subject. It is sophisticated and the setup will set you back a few dollars. Some homebrewers use it to bottle sediment-free beer from kegs without losing any carbonation.

*Keeping the Pressure On,
The Professor, Hb.D.*



Who's Confused?

Dear Professor,

Can you explain some of the terms used by commercial brewers in their ads? Terms such as "cold-filtered," "heat-pasteurized," and the latest—"dry." Another thing that rouses my curiosity is, just exactly how do brewers accomplish the feat of producing "light" beers? Are they simply watered-down versions of their other beer or is there some chemical magic that they perform?

Thanks and keep up the good work.

Ron Grigsby
Orange, California

Dear Ron,

Cold filtration is nothing new. Some breweries have been doing it for

decades. Only now it is used as marketing hype in an effort to convince the consumer that the more you filter out the better it is. 'Nuf said about that.

Breweries get their beer cold so chill haze forms, then ultra-fine filter the beer to get all chill-haze protein, bacteria, yeast (and some flavor) out of the beer. This bypasses the heat pasteurization process. Pasteurization is a process by which the beer is heated to about 150 degrees F (66 degrees F) and then cooled. The heat kills off any bacteria or yeast, making the beer more stable so

it will have a longer shelf life.

Now "dry" beer is another story. As a homebrewer you may feel that dry beer has had everything you ever wanted in a beer taken out. The object is to make a beer that has no aftertaste and very little flavor. It is "drier," that is to say, it has less body and is not full-flavored. A waitress in a restaurant once commented that she liked it because it didn't have any of "that bitter beer flavor—and no aftertaste." Basically they make dry beer by designing a more fermentable beer and using fermentation techniques that do not impart any flavor to the beer.

Some "light" beers are watered-down versions of other beers, but most are mashed in a way that makes them more fermentable. Also, enzymes are used so that more of the carbohydrates become fermentable. It isn't really

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*magic, just manipulating the natural
brewing process a little here and there
to get less flavor in beer.*

*I'll have a wet beer,
The Professor, Hb.D.*

Seeing Sea Weed

Dear Professor,

I live near Puget Sound and there is always lots of seaweed washing up on our shores. What type of seaweed is used for Irish moss? Several distinct varieties are recognizable here.

Thank you.

Hal Bradshaw
Seattle, Washington

Dear Hal,

*Irish moss is a seaweed also
called carrageenan.*

Simply,

The Professor, Hb.D.

No Wimpy Beers

Dear Professor,

1. My last brew was a decoction mash of eight pounds six-row malt (and a bit of chocolate malt) pitched with M.e.V. No. 13 ale yeast. Starting gravity was 1.045 corrected. This yeast didn't get wild enough to blow any detritus from the carboy, although it fermented clean and healthy. It also didn't ferment very vigorously despite the 85-degree-F (29-degree-C) temperatures of Titusville, Fla. Finishing gravity was 1.018, which is ridiculously high. This was my third decoction mash and I haven't had any troubles like this before. The pH was good throughout the mash, I reached the best starch end-point I've ever seen and the mash didn't spend a lot of time above 152 degrees F (66.5 degrees C) (and of course the brew was finished fermenting). Why such a crappy extract, wimpy primary ferment and high terminal gravity?

2. Although I've run across this information before, I can't seem to find it in any of my reference materials. I can find specifications for wort gravity per pound of grain per gallon of water. This is useful, but how much of this extract is actually fermentable for two- and six-row pale malt, Munich, crystal and dextrin malts?

3. Does a weak bleach and water solution have a noticeable vapor

pressure? The bleach smell usually is noticeable, indicating it might boil off relatively quickly. Campers often are advised to sanitize water by adding bleach for a while and then allowing it to vent by loosening the lid on the water canister. How long can I depend on the bleach staying in solution in a loosely covered container?

4. The liquid ale yeast culture in item one above produced very little sediment during fermentation. Red Star and Doric yeasts produced a reassuring amount of muck on the bottom of my fermenter in addition to blowing copious amounts of scum out of the carboy. Is this natural for a liquid yeast culture?

5. In order to have meaningful judging, one has to have a well-accepted standard by which to judge. I've looked at a lot of *zymurgy* Winners Circle recipes and many of them don't bear much resemblance to the real thing ingredient-wise. Also, judges seem to disagree on what the characteristics of each beer style are. If I decide to enter a competition, I'm going to be brewing a pattern; I want that pattern to be documentable for the beer style I'm attempting to make. What sources of information exist that detail color hue (red, yellow, brown, black), Lovibond color, alcoholic content, finishing gravity, bittering hops, flavor hops, finishing hops, etc.?

6. I recently visited the Goose Island Brewery in Chicago, Ill., but I haven't seen any reference to it in *zymurgy*. Have you visited yet?

Beers to you,

Jim Shaver

Titusville, Florida

Dear Jim,

A wimpy fermentation? I got a solution for you. Sounds like you didn't culture your yeast to a high enough volume. Ideal pitching rate is such that after pitching you get 15 million cells per milliliter. You've got to culture up with starter wort of at least one quart to get the vigorous start you are seeking. Yeah, I know, it works at lower pitching rates. I do it often, but the ferment is wimpy and you do get a different beer and often a higher terminal gravity. Your symptoms are classic.

There is an excellent article about extract from grains by Randy Mosher in our Spring 1988 (Vol. 11, No. 1) *zymurgy*. The information you're looking for is on pages 40 to 42.

I don't know about vapor pressures and official residency of bleach, but I do know that an open plastic bucket of water and bleach sanitizing solution will remain "bleachy" for weeks. I'd say, if it smells "bleachy," depend on it. If it doesn't, don't.

Little sediment? Just another sign of not enough yeast pitched.

There's always room for interpretation of a beer style, but there are guidelines. Start with the AHA National Competition Rules and Regulations. Beer color is detailed in George Fix's article in *zymurgy* Fall 1988 (Vol. 11, No. 3). Also, look for Fred Eckhardt's *Essentials of Beer Style*, which is now published and available through the AHA.

Goose Island? I haven't, but my colleague Charlie Papazian has. Good stuff there, he says.

*Bleachy keen,
The Professor, Hb.D.*

Bruised Beer

Dear Professor,

Beer salvaging is the topic. Suppose someone gives you a keg of flat Hale's Ale. How can you bottle it if you do not have a CO₂ system? My solution: Pump the leftover ale into a clean carboy to the four-gallon mark. Add one pound of malt extract boiled in one gallon of water for 30 minutes. Cool the sweet wort and add to the carboy with yeast and a blow-off tube, then proceed in the usual manner to bottle.

Any other solution for bottling leftover ale?

*Chill Haze
Spokane, Washington*

Dear Chill,

Geez. If the boys at the brewery knew, they'd have nightmares. You just can't really save beer and keep any quality without a CO₂ system of sorts. What you're doing may work, but the beer will be seriously bruised, oxidized and much changed.

*Just drink it fresh,
The Professor, Hb.D.*

Sometimes a Great Notion

Dear Professor,

I am a homebrewer only on my 10th or so batch of beer. I bought a book and jumped right into all-grain brewing—with great success. In fact I have never followed a recipe and have come up with a beer that makes the "king of beers" more like a squire.

My point is that I have brewed instinctively and by taste, so not only do I have little idea what to call it, I am wondering if it's important. I would like to know your thoughts on the purpose of titles like pale ale, Pilsener, stout, etc. Is the title's function to give the consumer an approximate idea of what the beer is like, or to indicate that the beer is attempting to approach some ideal taste? On the

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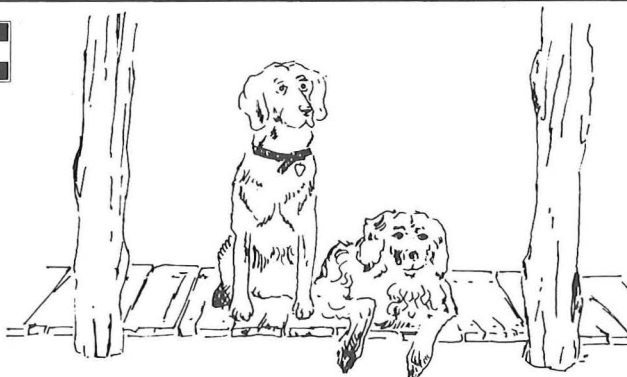
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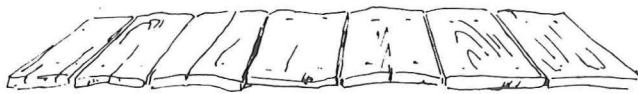
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A message from the DEAN regarding

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The College is founded on value. While education does not come without cost, we believe that everyone should have the chance to gain from its benefits. The "Total Education" provided by this college is open to everyone regardless of race, creed, or brand preference.

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Since time immemorial, civilization has enjoyed beer – the beverage of moderation. An entry into the Pilgrim's log even stated their need to land at Plymouth "because we were dangerously low on beer". The College and University stand as guardians for people's rights to social enjoyment.

As Dean of this college, I encourage you to open the door to adventure, excitement, and social pleasure. You may be degreed, clothed (free T-shirt upon graduation), and will have made friends along the path of the college that will last a lifetime.

I personally urge you to accept this challenge; and to those who accept, I wish you Godspeed in your pursuit of "Total Education" through these hallowed halls of higher learning.

Sincerely,



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one hand, I dread labeling my beer because I don't want to compete with the preconceived notion of a "pale ale," but on the other hand calling it "beer" doesn't quite say it all.

Semantically muddled,
Lars B. Spillers
Schenectady, New York

Dear Lars,

You are certainly unique in your approach. I admire your gutzpha. There are so many variations of beer within a "classic" style that I would

tend to agree with your first statement: The title's function is to give the consumer an approximate idea of what the beer is like.

The AHA has a national competition where styles are defined probably more than you'd care to define them, but when you're staging a competition, standards must be set. It's kind of a special game some of us homebrewers play. Our definitions aren't the be all and end all, but a very good approximation.

Call me approximately Professor,
The Professor, Hb.D.

Ouch Is Right

Dear Professor,

I recently upgraded my brew equipment with an old 55-gallon, oak whiskey barrel (prompted by the destruction of my 15-gallon glass secondary...ouch). Could you give me any advice concerning the use of wood as a secondary vessel? Michael Matucheski's article (Summer 1989 Vol. 12, No. 2) was partially enlightening.

Brewing an all-grain 55-gallon batch should be interesting to say the least. It will fill three kegs along with a few cases of bottles. Being a college student, I must produce enough to keep the roommates out of the private stock. Any suggestion for novel equipment for my upcoming batch would also be helpful.

James Leidel
Lafayette, Indiana

Dear James,

Michael Matucheski's article is the best source of information for using wooden barrels, but using wood is inviting a lot of bacteria.

I'd suggest you get a 55+ gallon, food-grade plastic bag and line the cask. I've seen this done in some microbreweries with success. It works and you'll minimize the unwanted microorganisms.

Bagging it,
The Professor, Hb.D.

Two Cups to Prime

Dear Professor,

I began my involvement in homebrewing this year. I received a Summer 1988 *zymurgy* (Vol. 11, No. 2). In it I read that you can substitute 1 1/4 cup light malt extract for three-quarters cup of corn sugar. My question is how do you prepare the extract? If you mix it with boiling water, how much water do you use? I would just as well not use any sugar in my homebrew. I fell into the trap of using 2.2 pounds of corn sugar with a 3.5-pound can of extract for my first batch (yech!). Why do malt-extract manufacturers still publish sugar-beer recipes? It would make better sense for them to recommend the use of additional extract instead of corn sugar.

Jose G. Nevarez
El Paso, Texas

Dear Jose,

Simple. Use about 2 cups of water in which to boil your priming sugar or malt. That'll do it nicely.

You're right. It beats me. I'll never figure out why most malt-extract manufacturers recommend using lots of sugar in their recipes. Maybe they want the customer to switch to another brand. Kind of reverse psychology.

Sad thing is it isn't funny to thousands of first-time homebrewers like yourself. The companies have been told for years; many don't listen, but some do.

Hose B,
The Professor, Hb.D.

What's All This Brew Hop Hop?

Dear Professor,

To imitate Gilda Radner's character, Emily Latella, "What's all this about Bittering Units?"

When I first started brewing a few years ago, my beers were hopped by the "ounces per batch" method. As I progressed, I read several books and found suppliers who sold hops with the alpha-acid content analyzed.

In my reading, it seems that several methods of calculating bittering levels are being used:

- **Ounces per batch—**

Charlie Papazian's *Complete Joy of Home Brewing*

- **Alpha Acid Units (AAUs)—**Dave Miller's *Complete Handbook of Homebrewing*

- **Homebrew Bittering Units—***zymurgy*

- **American Society of Brewing Chemists (ASBC) Bittering Units—**described in Byron Burch's *Brewing Quality Beers*

- **European Bittering Units—**described in Michael Jackson's *New World Guide to Beer*

It would seem that a bit of standardization might be in order and would avoid confusion. May I suggest that recipes published in *zymurgy* use the ASBC method? It takes into account hop alpha-acid content, batch size and length of time each batch of hops is boiled. Of course, listing ounces of hops and time of boil could

be continued for those who wish to be less exacting or who cannot find analyzed hops.

Let me say that all of the above references should be in the library of all homebrewers who want to go beyond just making a batch of beer and who really want to understand what all the brew-ha-ha is about. By reading all of the above, I've learned to "Relax more, worry less, and have a homebrew I'm proud to give to friends also."

Sincerely,
Paul Edwards
Twelve-Pack Technologies
Indianapolis, Indiana

Dear Paul,

Your point is well-taken. Charlie Papazian's book was written before the advent of *Homebrew Bittering Units*. The editors of *zymurgy* feel that HBUs are the most practical for most homebrewers to understand and use in concocting recipes. You are right, it isn't exact, but HBUs work well for beginners and intermediates who do not want a whole lot of extra science to get involved in.

I think as homebrewing becomes more sophisticated we'll see more ASBC bittering units, but we simply can't leave the beginner behind. We should continue to use both systems.

Remember, there will always be newcomers. Thanks for the letters and pointers.

To the bitter end,
The Professor, Hb.D.

Holy Smokes!

Dear Professor,

A strange phenomenon occurred recently when I attempted to have a homebrew (a stout). I got a bottle out of the refrigerator and filled a mug halfway. About 10 seconds later I heard a loud pop and watched in horror as the mug developed several large cracks from the base up. I put the mug in the sink and sadly watched the beer disappear down the drain. Why did this happen?

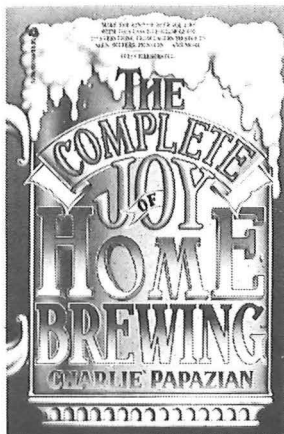
The temperature difference between beer and mug wasn't more than 40 degrees F (4.5 degrees C). I know my beer is not what it's cracked up to be, but this is ridiculous. I was glad I was not trying to convince a skeptical commercial beer drinker to relax and have a homebrew. The mug was quite new; I got it from a brewpub in Tempe, Ariz., this spring and it did not have any obvious defects. Now every time I pour a beer I watch for another mug to disintegrate.

Ralph Bucca
Huntingtown, Maryland

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Dear Ralph,

Quick. Send me the recipe for that stout. I think we can corner the market on constipation cures.

I don't know why that happened. Sounds like David Bruce's (of London Firkin Pub fame) Earth Stomper. When you drink that stuff and the bottom's falling out of your world, then the world will fall out of your bottom.

*What it is cracked up to be,
The Professor, Hb.D.*

Unsticking Fermentation

Dear Professor,

Regarding the stuck fermentation problem posed by Peter Caddoo in the summer 1989 issue of *zymurgy* (Vol. 12, No. 2). My experience with stuck fermentations in high-gravity materials (wort and musts) is that, excepting too-high temperatures and toxic materials, the problem is usually lack of oxygen and nutrients. Yeasts need oxygen during the first 24 hours to produce adequate cell population to complete the fermentation. The oxygen also allows the yeast to produce lipids in the cell wall that protect the yeast from the alcohol toward the end of fermentation when the alcohol content is high enough to be toxic to the cells.

Yeasts require a rich supply of nutrients to perform well at high gravity. High levels of protein within

the yeast cell also protect it from higher levels of alcohol.

A new product called "Yeast Hulls" should be considered as a nutrient supplement. It is rich in amino acids and lipids and can absorb any toxic byproducts that may be produced during fermentation.

Clayton Cone
Technical Consultant
Lallemand Inc.
Montreal, Quebec
Canada

Dear Clayton,

Thanks, Clayton. We much appreciate your info.

*No problem,
The Professor, Hb.D.*

Ten into Six Won't Go

Dear Professor,

The following two questions have come to mind. First, I would like to brew a 10-gallon batch of all-grain beer but have only a six-gallon brewpot. I am contemplating a relatively light-bodied beer with 15 to 16 pounds of grain for 10 gallons. Is this possible? What problems might I encounter with a particularly thick mash?

Second, I am a big fan of the Belgian sour ales like Rodenbach and Bios Copper Ale. In *The Pocket Guide to Beer*, Michael Jackson refers to the lactobacillus culture in such beers that provides their unique sour taste. Is it possible to obtain lactobacillus for homebrewing purposes? How would I use it (and how much would I use) if I obtained a culture? Thanks for any suggestions.

Striving for culture
through homebrew,
Steve Lerch
Olympia, Washington

Dear Steve,

I don't know how you can brew a 10-gallon batch in a six-gallon brew pot. Am I missing something here? You could brew two five-gallon batches. Fifteen to 16 pounds of grain for a 10-gallon batch will make a light- to medium-bodied beer. A particularly thick mash would have moisture and heat distribution problems. How thick is your "thick"? I'd advise following the guidelines in any

number of homebrewing books with regard to water-to-malt ratios.

The Belgium sours are some of my favorites too. Unfortunately it isn't simply a lactobacillus culture that makes the flavor of those beers. We are doing some research on these beers right now and anticipate a book on the subject sometime in 1990.

Meanwhile, develop your brewing skills now so when the information becomes available you can dive in.

*Sin-sourly,
The Professor, Hb.D.*

Clean Gushers

Dear Professor,

zymurgy has given me a lot of answers in my 1 1/2 years of homebrewing, and my beers have benefited. However, in three very different batches (of 44 to date) a problem has arisen that confounds me. When I crack open a bottle, there is a rush of carbonation that carries all the sediment with it and creates a head that is excessive and short-lived. Other than having sediment through it, the aroma and flavor seem quite good (although at this point it's hard to tell). What factors could you suggest that I examine for the culprit?

Yours in search of
(dare I say it?) good head,
Nick Hogan
Canandaigua, New York

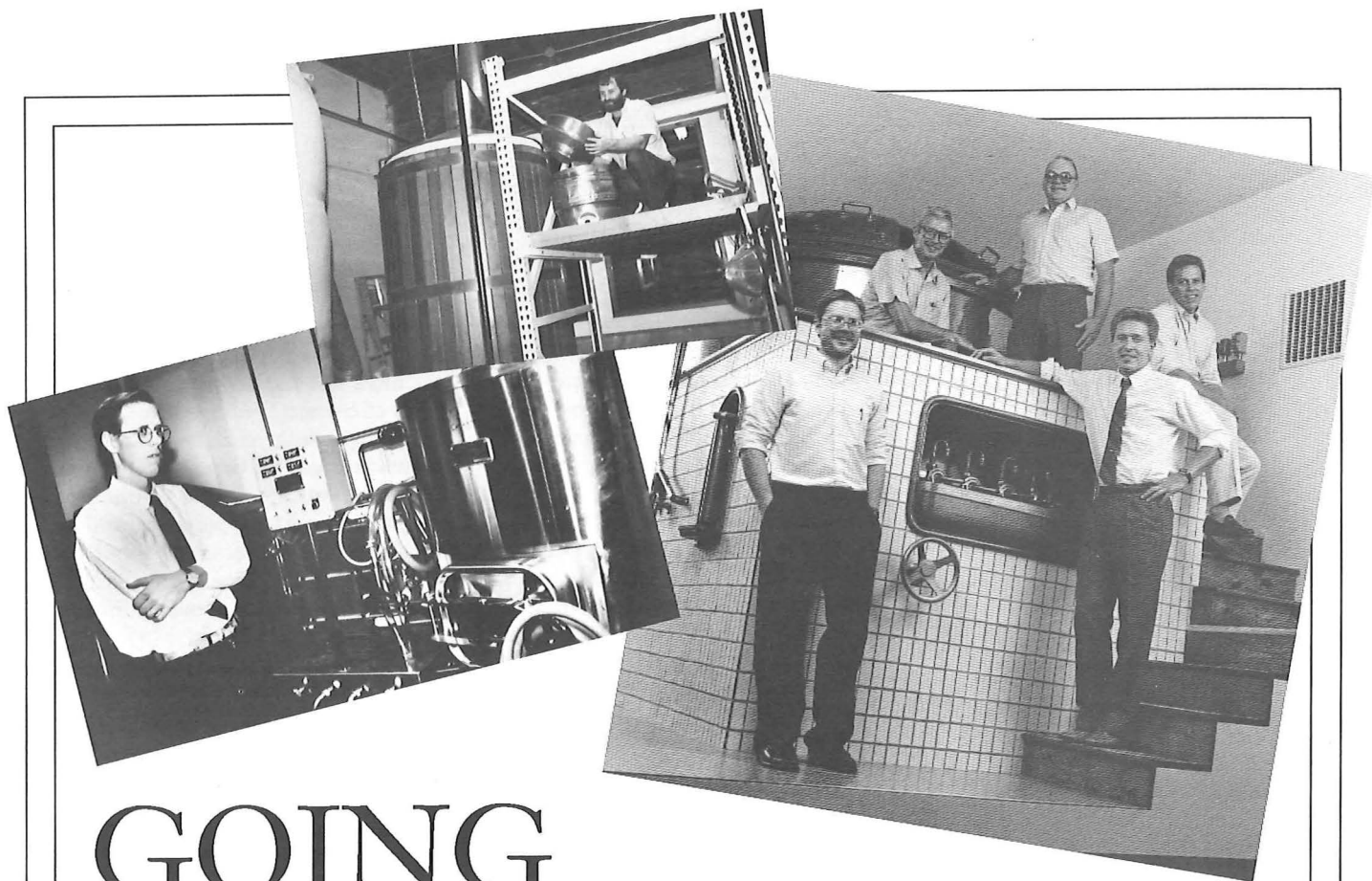
Dear Nick,

Well, there are a lot of things that can cause gushing. Overpriming is one, but not the usual culprit. If the beer is hazy or there is a ring deposit on the inside neck of the bottle that's a sign of contamination by bacteria or wild yeast and this can cause gushing.

But here's another twist. If you are brewing all-grain beers and are using distilled water with no minerals added, then you may have oxalate problems. Demineralized water and all-grain brewing can cause certain compounds to develop in the finished beer that will cause gushing, even in sediment-free beer.

Give me a little more history of your beers and send me a bottle (well packed) and we'll try to solve this one for you.

*Mysteriously,
The Professor, Hb.D.*



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THE MAGAZINE FOR MICRO AND PUB-BREWERS

REVIEWS



Classic Town Pubs

by Neil Hanson, Pavilion Books (1988)

On Monday, June 13, 1983, I first set foot inside a pub, the Zealand Arms, in Warwick, England. In the garden out back, I lifted a pint of Davenport's bitter, a church bell rang, and my friend Rod said, "It's not really like this; when you're gone, they just roll it all up."

Well, I think he was putting me on, because I found the Zealand Arms, intact, on page 91 of *Classic Town Pubs*, one of 100 English pubs described and pictured in this delicious volume.

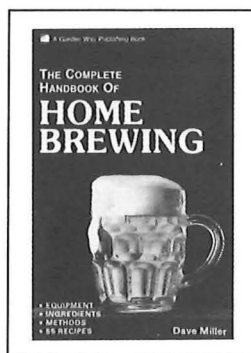
Even if you never leave your armchair, you will be treated to hundreds of photographs of pubs and their exquisite architectural details, a history of each pub, its town and region and tantalizing notes on the beers, all logically presented as 11 guided trips from London.

You'll visit pubs that brew their own, pubs with guest beers and resident ghosts, and pubs that began serving centuries before Columbus set sail for America. You'll marvel, you'll laugh, and just in time you will visit the lavatory in Liverpool's Philharmonic Hotel, "truly a cathedral among Gents."

Even if you have two earlier classics on the subject, *The English Pub* by Michael Jackson (1976) and *The English Pub* by Andy Whipple and Rob Anderson (1985), you will find much that is new and enjoyable in *Classic Town Pubs*.

Available in bookstores (distributed in the United States by Viking Press) for \$16.95, you can also order directly from the Campaign for Real Ale. Send a personal check for \$26 to: Products Secretary, CAMRA Ltd., No. 4 Alma Road, St. Albans, Hertshire, AL1 3BW, England, U.K. A companion volume, *Classic Country Pubs*, is available in England only. Order both from CAMRA for \$42 total.

—Kihm Winship



The Complete Handbook of Home Brewing

By Dave Miller, Storey Communications Inc. (1988)

A book with this title is what homebrewers have been waiting for a long time: a single reference source that gives "how-tos" and "why-fors" in one location, in a clear style. Sadly, brewers will have to wait a while longer because this book is not "complete."

Miller himself doesn't believe the title. In the introduction he states, "...I have not hesitated to judge the worth of certain findings in the light of my own experience." What this means is that he occasionally gets different results with his equipment from those reported elsewhere, and in such cases he has given us what he got. This is not necessarily bad, if indicated as such, but it hardly makes for a complete handbook.

Another example is his treatment of lautering systems. Miller uses a grain bag in a bucket with a tap at the bottom, a common enough lautering system. So he spends a page describing it, accompanying it with three very nice drawings. What of the popular picnic cooler/copper manifold? It gets a paragraph and is referred to as a mash-tun *and* a lautertun. In reality, there need be no such restriction. It is never fully described, and the reader is referred to unnamed articles on its construction and use. Left unanswered are questions about why someone might choose such a system, and its advantages and disadvantages.

Even this would not be so bad if Miller told us that he is *only* reporting on his methodology. Without such caveats, it is hard to know when he is speaking of accepted practice and when we are getting what he does in his own kitchen.

It is this lack of focus that really keeps the book from being a seminal work such as *Brewing Lager Beer*. There, Gregory Noonan also reports on his own activity, but his passion for decoction and his denunciation of infusion make it easy for the reader to separate Noonan's beliefs from the other important information.

Now that I have told you the book's shortcomings, let me recommend it as a terrific book for beginners who want to advance past extracts eventually, and as a companion to *Brewing Lager Beer* for all-grain brewers.

As a companion, brewers can compare and contrast the information given and make more informed choices about procedures and techniques (e.g., "Should I use/avoid the iodine test for starch conversion?"). Where they agree, you will be on solid footing. In general, Miller gives a more practical approach.

As a beginner's book, it has the right emphasis. There are three chapters on brewing from extract and an appendix that lists basic recipes for many styles, which you can easily customize to your own taste. When you want to understand more about your beer, there are eight chapters on all-grain brewing, nine chapters on the raw materials and four on storing, serving and appreciating your beer. Each is full of detail, yet is easily read.

The recipes are wonderful. Miller first describes the style he is trying to achieve, discusses how he goes about achieving it and then gives a clear, basic recipe. If he feels you may not be able to make such a beer with standard ingredients or yeast, he lets you know you are headed for rocky shores, and how to chart around them.

His writing style is coherent and straightforward, if just a bit dry. There are no cloying jokes or distracting "funny" beer names; Miller is more interested in the work at hand than entertainment, and his book grants you the respect of believing that you will be, too.

This is an earnest book that the homebrewer definitely should consider. Following Miller's guidelines you will not go far wrong. For advanced brewing, however, you must still look to other sources to see the whole picture.

—Darryl Richman

Reprinted from "Brews & News," the monthly newsletter of the Maltese Falcons Home Brewing Society, Woodland Hills, Calif.



Beer: A Connoisseur's Guide to the World's Best

By Christopher Finch, Abbeville Press (1989)

A new book has hit the shelves. Colorful and great looking in hardback, *Beer* really shows off our favorite beverage. Christopher Finch, author of many books on a wide variety of subjects, seeks to establish the credentials of beer as a beverage of quality. His book will convince many.

Published by one of the leading coffee-table book publishers, *Beer* delivers page after page of colorful art, from historical images to beautiful food and beverage shots. Abbeville has delivered a definite gem in terms of visual appeal.

There is a message in Finch's book; something he has championed in his syndicated column on beer. As a beer lover and native of England, Finch felt like a stranger in a strange land when he first came to the United States. He simply couldn't find a good beer. *Beer* is filled with Finch's enthusiasm for the new beer revolution that has changed all that and is now in its second decade.

Beer concentrates on the movement for beer quality. It in no way attempts to review the whole world of beer. Instead it focuses on the "best"

by Finch's estimation. Those who have pursued better beer will recognize many, many old friends. Some favorites may be overlooked, but overall it is a good roster.

What is particularly invigorating about Finch's writing, aside from its sheer elegance, is his tenaciousness. Here is a man of opinions who delivers them without velvet gloves. When he chastises new brewers who stress good intentions before learning their craft, many can only say "amen."

The careful reader may discover several opinions that could be difficult to swallow. Can a well-bottled beer endure for one or two years? Does old beer really smell like a match after it is lit? Does oxidation come from oxygen combining with malt acid? Is Belgian lace the result of careful pouring? Is it yeast that really promotes hangovers? The Belgians may take issue with the requirement of scrupulous hygienic conditions to create a great beer.

All in all, it's a nice addition to a beer lover's bookshelf. Makes you salivate just looking at the photographs.

—Daniel Bradford

Product Review: The Marcon Mini-filter

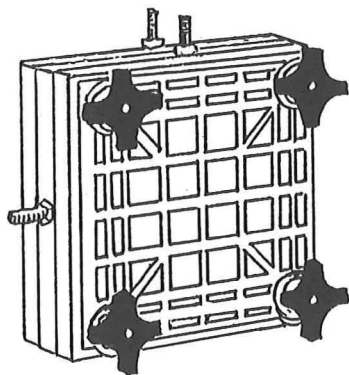
I've been making homebrew for 19 years and have never had the desire to filter my beer. Consequently, when I was sent a mini-filter system by Marcon Filters of Downsview, Ontario, Canada, I was less than inspired to put it to use.

Then I found myself in the predicament of having promised five gallons of draft beer and having nothing but five gallons of yeast-hazed brew slowly clarifying in a 6 1/2 gallon carboy. And the party was the next day. I remembered the Marcon filter and decided to filter and carbonate five gallons of beer in time for the party. I prepared for the worst, remembering

all kinds of complicated formulas written in books about filtration and artificial carbonation. I also remembered the time I helped a friend use a Vinamat™ filtration system, losing much beer and cracking a filter plate (that was expensive).

The beer I filtered was excellent; clear, sediment-free and perfectly carbonated. Now that I've done it I can say that I was impressed with the ease of operation and set up, minimal leakage (some beer seepage has to be expected with any tangential-flow, filterpad system) and well-built, sturdy construction (designed to take up to 25 psi of pressure).

The system's design allows unfiltered beer to be transferred under pressure from Cornelius-type soda tanks through the filtration system and into a receiving tank. Required



accessory equipment includes pressure tanks and a CO₂ tank with regulator and valves.

The model I used has three plates that hold two filter pads. The plates are reinforced with a three-quarter-inch thick acrylic frame. Various filter pads are

available, ranging through coarse, clarifying and sterile grades. Other special filter-pad options include a non-asbestos carbon filter pad impregnated with diatomaceous earth (kieselgur) and activated carbon. The PVPP (Polyclar) filter will treat the beer as it passes through to help eliminate chill haze-forming precipitates. The carbon pad can be used to improve the quality of the water.

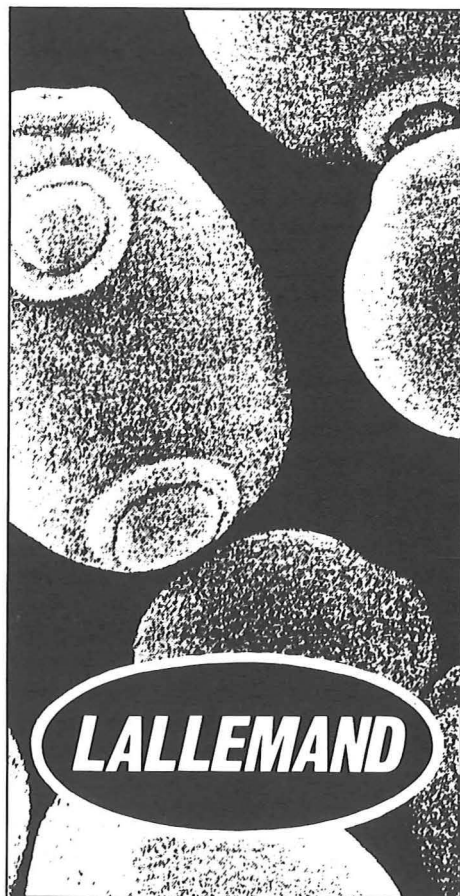
Membranes for microfiltration (down to .2 microns) are available for sterile filtration.

A five-plate (four pads) model also is available, or the three-plate model

can be expanded, enabling the homebrewer to do two grades of filtration with one pass through the system and minimizing clogging.

After using the Marcon Carosello Pressurized Filtration System I am no longer intimidated by the filtration process. For homebrewers who want sediment-free, microbiologically stable, crystal-clear beer, filtration is an option well worth considering if you have the money and adventurousness. The Marcon system is easy to use and sturdily built. As with any system of this type, it requires attention to sanitizing procedures, flushing of pads to eliminate "paper taste" and use in an area that accommodates collection or drainage of beer seepage from the pads. Its use seems ideal for the advanced homebrewer or pilot breweries in small commercial applications. The suggested retail price is \$160 U.S. and \$200 Canadian. Available from Marcon Filters, 40 Beverly Hills Drive, Downsview, Ontario, Canada M3L 1A1.

-Charlie Papazian



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The water we use to make homebrewed beer should be sterile and chlorine free. This means that any free chlorine or bacteria should be removed before the water touches the beer ingredients. When chlorine touches the malt extract and hops it will create unpleasant flavors and aromas in the beer. Bacteria will have a somewhat similar result.

A commercially available charcoal filter will remove most of the chlorine, and varying amounts of bacteria, depending on what kind you buy.

If you aren't able to spend \$200 or so for the filter, then consider boiling the water. This operation is safe, sure and, best of all, it doesn't cost anything but an hour's time. Some people may say they don't have a pot large enough to boil five gallons of water, that the burner is not hot enough to bring it to a boil and that it is dangerous to pick up a large pot of hot water to pour into storage containers. All true. These problems can be solved by using two or three large saucepans, a funnel and several one-gallon plastic jugs.

Fill each of the saucepans with one gallon of tap water, put them on the stove and in six or seven minutes they will be at a hard boil. Pour this boiling water into a plastic jug and put the screw cap in place. Repeat until the desired number of jugs is filled. When it's time to make beer just use the water in these sterile jugs of cool dechlorinated water. Also, be sure to use it when rehydrating the dry packages of yeast.

I began receiving many more compliments on my homebrew when I started preboiling all of the water. It can happen to you—please try it.

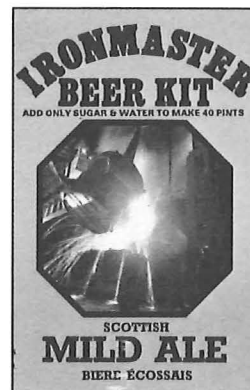
Black is Beautiful A Scottish Mild Ale

When I started making this beer I observed the words "Scottish Mild Ale" on the label and assumed it would be somewhat like an English mild. I had no suspicion otherwise until after it was bottled and it wouldn't clear to an amber color.

I have heard it said that someone looks out for fools and idiots. I must be among those lucky ones because when I tasted Black is Beautiful the malty, full-body flavor with hops and

aroma shining through told me that here was another beer a homebrewer could be proud of. The one-and-a-half inch head was a point of special pride.

Can it be that because I preboil all my water to dechlorinate it I haven't had a bad batch of brew in a long time?



Ingredients for 6 gallons:

- 4 pounds Ironmaster Scottish Mild Ale kit*
- 2 pounds amber dry malt extract*
- 2 cups crystal malt (cracked)*
- 2 teaspoons gypsum*
- 1 teaspoon Irish moss*

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1 package dried yeast provided with kit

3/4 cup corn sugar for bottling finishing hop oil

Original Gravity: 1.040

Final Gravity: 1.015

(Note: All water was dechlorinated and sanitized by boiling.)

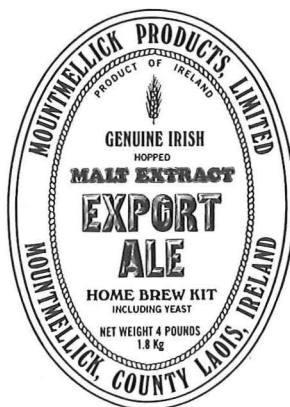
Brewer's Specifics

Add the crushed malt to one quart of hot water [about 150 degrees F (65.5 degrees C)] and steep for one-half hour. Strain out the grains and add the sweet liquid to enough hot water to total one gallon, then add the malt extracts and gypsum. Boil for 45 minutes. Add the Irish moss for the last 30 minutes of the boil.

Add the boiled wort to a seven-gallon carboy containing two gallons of cold water and top up to six gallons with more cold water.

Add hydrated yeast when wort temperature is 70 to 80 degrees F (21 to 26.5 degrees C). Ferment for 10 days to two weeks and bottle using three-quarters cup corn sugar in 1 1/2 cups of hot, boiled water. You may add one drop of aromatic finishing hop oil to each 12-ounce bottle just before fixing the cap in place.

Try drinking Black is Beautiful in less than two weeks and you will enjoy a richer, maltier flavor. It will become somewhat drier after more aging.



County Laois Pale Ale

What better name for a rich pale ale than that of the Irish county where the ingredients were made? County Laois (pronounced "Leesh")

Pale is full-bodied and malty-flavored with just enough hops to say "Here I am." There are no flavors or aromas except those from the two major ingredients: malt and hops.

The manufacturer of this kit recommends an all-malt recipe with a one-hour boil and aroma hops for a full hop aroma. I was overjoyed to follow these instructions. When homebrewers taste County Laois Pale they pay me the ultimate compliment of saying "Which kit did you use? I want to make a batch of ale just like this."

It is now time to stop talking and start doing.

Ingredients for 5 gallons:

4 pounds Mountmellick Export Ale kit

2 pounds amber dried malt extract

2 cups crystal malt (cracked)

1 ounce Willamette hops (4.3 alpha acid Homebrew Bittering Units) for bittering

3 teaspoon gypsum

1 teaspoon Irish moss

1 package yeast provided with kit

3/4 cup corn sugar for bottling finishing hop oil

Original Gravity: 1.048

Final Gravity: 1.008

(Note: all water was dechlorinated and sanitized by boiling.)

Brewer's Specifics

Add the crushed malt to one quart of hot water [about 150 degrees F (65.5 degrees C)] and steep for one-half hour. Strain out the grains and add the sweet liquid to enough hot water to total one gallon, then add the malt extracts and gypsum. Boil for one hour. Add the Irish moss for the last 30 minutes of the boil.

Add the boiled wort to a seven-gallon carboy containing two gallons of cold water and top up to five gallons.

Add hydrated yeast when wort temperature is 70 to 80 degrees F (21 to 26.5 degrees C). Ferment for 10 days to two weeks and bottle using three-quarters cup corn sugar in 1 1/2 cups of hot, boiled water. You may add one drop of aromatic finishing hop oil to each 12-ounce bottle just before fixing the cap in place.

County Laois Pale can be enjoyed after two weeks in the bottle, but may take another week to become sparkling bright and display its rich amber color.



Double Stout

While examining my shelf of extracts to decide what kind of stout to make, my eye was caught by the maker's recommendation to do a double malt, which means to use two cans of malt extract, forget about the white sugar and thus make a full-bodied brew.

It would not be necessary to add any extra hops because the two cans of malt extract were hopped stout kits, and for this reason double stouts.

Double Stout lived up to its promise in every way. It was generously hopped and flavored with specialty grains. The thick head was a red-brown color with the aroma of coffee beans and hops rising from it. Most of all, it tasted delicious—just as a good stout should.

Ingredients for 6 gallons:

- 2 Telford's Irish Stout kits
- 3 cups crystal malt (cracked)
- 1 cup roasted barley (red)
- 1 pound amber dry malt extract
- 1 teaspoon gypsum
- 1 teaspoon Irish moss
- 1 package yeast provided with kit

3/4 cup corn sugar for bottling
Finishing hop oil

Original gravity: 1.050

Final gravity: 1.018

(Note: all water was dechlorinated and sanitized by boiling.)

Brewer's Specifics:

Add the crushed malt to one quart of hot water [about 150 degrees F (65.5 degrees C)] and steep for one-half hour. Strain out the grains and add the sweet liquid to enough hot water to total one gallon, then add the malt extracts and gypsum. Boil for 45 minutes. Add the Irish moss for the last 30 minutes of the boil.

Pour the boiled wort into a seven-gallon carboy containing two gallons of cold water and top up to six gallons with more cold water. Add hydrated yeast when wort temperature is 75 degrees F (24 degrees C). Ferment for 10 days to two weeks and bottle using three-quarters cup corn sugar in 1 1/2 cups of hot, boiled water.

You may add one drop of aromatic finishing hop oil to each 12-ounce bottle just before fixing the cap in place.

Try Double Stout within two weeks of bottling. It will become drier after another week or two of aging.

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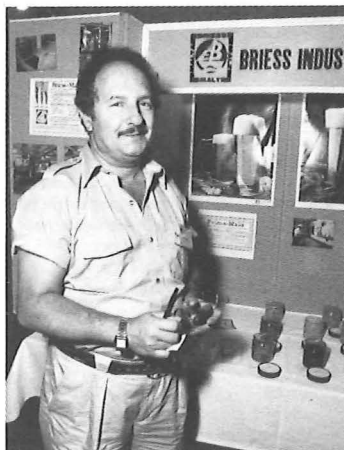
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HOME BREW CLUBS

DAVID EDGAR

zymurgy always welcomes your newsletters, photos of homebrew club members and articles on brewing, recent activities or experiments. We want you to have a say in what gets printed for your club. Because of our printing and production schedules, we need to receive your submission three months prior to the publishing date of each issue. We love receiving your newsletters, but they include so many different kinds of information.

We have designed the Club News Insert form so you can highlight, with a paragraph or two, the most important news from your club. Effective with this issue, we will not be able to print news from clubs that do not send in the Club News Insert form (or a substitute). If you don't have the form, please write or call the AHA office. In addition, we will no longer list the contact information for clubs that do not send in the Insert form. If your club does not have news to share, please return the form anyway so we may continue to provide our readers with the correct contact name and address.

For a free complete listing of all the clubs in North America (more than 120), see the order form on page 11 for Information Available from the American Homebrewers Association.

Send information to David Edgar, Club News Editor, c/o zymurgy, PO Box 287, Boulder, CO 80306-0287; (303) 447-0816; FAX (303) 447-2825.

ALABAMA

Birmingham Brewmasters: The club meets the first Thursday of each month at the Birmingham Homebrew Shop. Contact: Klaus Anderson, 1657 28th Ave. S., Birmingham, AL 35209; (205) 871-2337.

Madison Sobriety Club: The club has no formal structure and meets about every six weeks. Contact: Steve Conklin, 311 Red Oak Road, Madison, AL 35758-1540; (205) 461-8698.

ALASKA

Great Northern Brewers: Many members participated in this year's Alaska State Fair homebrew competition, Aug. 25 to Sept. 5. The competition was successful, with 96 entries. Congratulations to Randy Oldenburg, who achieved the status of Certified Judge after taking the Beer Judge Certification exam at the last AHA Conference. Meetings are the third Tuesday of each month. Contact: Randy Oldenburg, 7601 E. 34th, Anchorage, AK 99504; (907) 338-1472.

ARIZONA

Brewmeisters Anonymous held pool parties during the summer because it was too hot to brew. Congratulations to Harold Gee for

winning a first place with his Dunkel at the Southern California homebrew competition. September's topic was adjuncts. The club discussed yeast in October. An intra-club competition is planned to select a club entry for the AHA's Best of the Fest club competition. Dues are \$12 per individual and \$15 per family. Meetings are the second Sunday of the month at members' homes. Contact: Harold Gee, 242 W. Ivyglen, Mesa, AZ 85201; (602) 834-3974.

Suds of the Pioneers (formerly Bisbee Brewers) scheduled an Oktoberfest at the Electric Dave Brewery on Oct. 28. The Central Committee of Suds of the Pioneers defiantly challenge homebrewers and commercial brewers of Arizona and New Mexico to a non-sanctioned beer brewing contest, the Gila Monster Mash Challenge, scheduled for March 15. It will be among the cheapest competitions held, with \$1 entry fees. The judging format promises to be "fun and unusual." Dues are \$4 per month. Meetings are held monthly at members' homes. Contact: Slim Tighe, PO Box 144, Bisbee, AZ 85603.

CALIFORNIA

Anza Brewers and Connoisseurs: Contact: Al Andrews, 5740 Via Sotelo, Riverside, CA 92506; (714) 682-7202.

Barley Bandits: Contact: Dick Reese, 105 S. Glendon, Anaheim, CA 92806; (714) 630-6527.

Butte County Brew Crew: Contact: Bill Kalberer, The Home Brew Shop, 331 Main St., Chico, CA 95928; (916) 342-3768.

Clan de Stein: Annual dues are \$15 per household. Contact: Diane Keay, 183 Nob Hill Lane, Ventura, CA 93003; (805) 642-0571.

Crown of the Valley Brewing Society, Pasadena, will hold its Christmas party Dec. 10 with an award ceremony for its spiced ale competition; RSVP. Meetings are the second Sunday of the month. Dues are \$12 per individual and \$18 per couple. Contact: Mike Lanzarotta, 300 S. Raymond Ave., Pasadena, CA 91105; (818) 577-5548.

Fellow Fermenters Association: Annual dues are \$12. Contact: David McCartney, c/o MCC Homebrew Supplies, 707 Highway 175, Hopland, CA 95449; (707) 744-1704.

Gold Country Brewers Association co-sponsored the California State Fair Homebrew Competition in August, where they displayed the winning beers along with brewing information and paraphernalia. The competition was a huge success with more than 238 entries in 13 categories from California residents. Congratulations to Regan Dillon and Paul Macchia for taking best of show with their porter!

Congratulations to club members receiving best of class distinctions in other recent competitions: John McKew and Graca Vincente (HWBTA); Bill and Debbie Vandevort (Chico); and Phil Steed (Yolo County). Coming meetings

will feature a discussion of hops and hop growing, an introduction to beginning brewing methods for new members and a tasting of commercial "dry" beers. Dues are \$15 per year. Meetings are the second Tuesday of each month at the VFW hall, 3300 "U" St., North Highlands, Calif. Contact: Phil Steed, c/o R & R Fermentations, 8385 Jackson Road, Sacramento, CA 95826; (916) 383-7702.

Greater Whittier Foam Heads: Dues are \$12. Meetings are the second Wednesday of the month. Meeting places vary. Contact: John Erickson, 428 N. Curtis Ave., Apt. D, Alhambra, CA 91801; (818) 458-3772.

High Desert Homebrewers: Contact: Glenn Clinkenbeard, Hi-Desert Homebrewers Beer & Wine Supply, 13487 Powhatan Road, Apple Valley, CA 92308; (619) 247-2013.

Inland Empire Brewers: Contact: Sam Wammack, 16490 Jurupa Ave., Fontana, CA 92335; (714) 822-3010 or (800) 321-2739 (outside California).

Maltose Falcons Home Brewing Society: The Troubleshooters' Corner has become a popular monthly event. August featured the annual Sunfest. The Falcons urged members to write state and federal legislators to protest proposed "sin taxes" on beer.

Members were occupied during August and early September with the second annual Los Angeles County Fair homebrew competition. Entries arrived from all over the United States.

A BJCP exam (and judging classes) is planned for January or February. MFHBS' AHA-sanctioned 1990 Mayfaire Homebrew Competition entry deadline is April 21. Write to "Competitions" at the address below.

The Falcons' Nest computer bulletin board is accessible at no charge; (818) 349-5591, hours vary. Meetings are the first Sunday of each month. Contact: R. Bruce Prochal, c/o Home Wine and Beer Making Shop, 22836 Ventura Blvd. Unit 2, Woodland Hills, CA 91364; (818) 884-8586 or (818) 504-9400.

Redwood Coast Brewers: Contact: Dave Shields, 617 Amesti Road, Watsonville, CA 95076.

San Andreas Malts: Contact: Bill Stender, PO Box 40744, San Francisco, CA 94110; (415) 457-9705.

Santa Clara Valley Brewers Association: Annual dues are \$12. Contact: Bob Hight, 433 California St., Santa Clara, CA 95050.

Shasta County Suds'ers and Valley Vintners enjoyed 45 gallons of homebrew and a keg of Sierra Nevada Pale Ale at their annual Chicken Barbecue in August. Meetings are the second Saturday of the month at Good Times Pizza in Anderson. Dues are \$10.00. Contact: Raymond Ault, PO Box 839, Anderson, CA 96007-0839; (916) 347-5475.

SLO Brew Club held its first club-only contest with an opportunity to brew a batch at

NEW CLUBS:

OHIO

Bloatarian Brewing League: Well into their first decade, the BBL decided to lift the "pail of secrecy" off their homebrew club. The league consists of beer enthusiasts from the Tri-state area (Ohio, Kentucky and Indiana) and beyond. Members were instrumental in the success of the 1989 National Homebrew Competition, ensuring that all the second-round entries were properly received and handled. They also manned the hop display table during the conference beer exposition and helped organize volunteers for the Ohio River Beer Tasting on the final night of the conference.

BBL meetings have included tastings, raffles, slide presentations, special speakers and plenty of homebrew. Monthly meetings are held at the Drawbridge Inn, Ft. Mitchell, Ky., compliments of the Oldenberg Brewery. Annual dues of \$15 entitle members to a year's worth of newsletters and "card-carrying member" status. Also available is the League's T-shirt featuring "Bozmo the Jester."

"The BBL has just enough organization to accomplish what they determine to be necessary," says charter member Ray Spangler. Contact: Bloatarian Brewing League, c/o Ray Spangler, 3128 Hulbert Ave., Erlanger, KY 41018; (606) 727-1956.

RHODE ISLAND

Rhode Island Association of Brewers: The club has no formal structure (i.e., no officers or dues) and meets about every six weeks. Recent activities included a demonstration of all-grain mashing and a tour of microbreweries and brewpubs in the Boston area. Contact: Jerry White, 5 Spirketting St., Jamestown, RI 02835; (401) 423-0463.

SLO Brewing Co. brewpub as the grand prize. Congratulations to Dayal Kasapligil with his first-place winner, "Scotch Ale." Second place honors went to Howard Gootkin with his brew called "Boil Over" and third place to Steve Smith with "Steve's Irish Stout." A tour of the SLO Brewing Co. followed the contest.

Dues are \$12. Meetings are the third Wednesday of the month at the SLO Brewing Co. Contact: Howard Gootkin, 56 Los Verdes Drive, San Luis Obispo, CA 93401; (805) 541-0713.

Sonoma Beerocrats: August featured the club's annual seafood extravaganza at the home of Gerry and Laurie Villereal. Featured were delicacies donated by the club's abalone divers, plus the customary mountain of fresh oysters. Five-gallon kegs of homebrew were donated by Padraic Giffen, Dale James and Quentin Smith. Nancy Vineyard donated a keg of root beer for the children. Former member Kevin Cox sent three gallons of Vienna from one of his batches at the Butterfield Brewing Co. in Fresno.

During September the club helped the Sonoma County Harvest Fair put on the oldest statewide open homebrew competition in California, and several members took time off from brewing to make wine during the county's famed grape harvest. Peter and Sandy Stanley hosted a sausage and beer social meeting, and Great Fermentations of Santa Rosa held a "how-to" meeting, with former dairy owner Quentin Smith discussing sanitation. Annual dues are \$12/household. Contact: Nancy Vineyard, c/o Great Fermentations of Santa Rosa, 840 Piner Road, No. 14, Santa Rosa, CA 95403; (707) 544-2520.

Wild Yeast Culture: Contact: Bob Katenburg, 1452 Cortez Court, Walnut Creek, CA 94598.

Worts of Wisdom is proud to announce a new on-line service, the Better Brewing Bureau. Dedicated to better beer, this electronic bulletin board covers a variety of topics including special events, recipes, club news, brewing help and general discussions. The Better Brewing Bureau may be reached by dialing (415) 964-4356. The service is text only, so it should work on any computer equipped with a modem set for 300, 1200 or 2400 baud. Dues are \$12. Meetings are the last Wednesday of each month at Fermentation Settlement Store. Contact: Tom Houts, 2418 Alvin St., Mountain View, CA 94043; (415) 967-8592.

Yolo County Brew Club: Congratulations to the winners of the third annual Yolo County Homebrew Competition! Phil Steed, president of Gold Country Brewers Association, took best of show with his "killer" Pale Ale. Daniel Holm of Santa Rosa won the light category with his Weizen, Thomas Altenbach of Tracy won the browns with his Doppelbock and Jay Ankeney of Manhattan Beach took best black beer honors with his sweet stout. Meetings are at the Senior Citizens Center in Wood-

land on the third Thursday of each month. Dues are \$12. Contact: Vern Wolff, Rancho del Lobos, PO Box 538, Road 85C, Esparto, CA 95627; (916) 787-3615.

COLORADO

Deep Wort Brew Club celebrated its first annual Summer Brew-Off June 17 in the mountains of Pike's Peak National Forest. Members, supporters and guests attended the brew-off, which showcased a fantastic array of outdoor brewing equipment. Members brewed four beers simultaneously, including Steve Andrilla's "Hearty Outdoor Ale," Jim Harden's "Octoberfest," Frank Vlcek's "White Water Pilsener," and Bob Wood's "Little Ben's Wheat." Three of the beers were full mashes, two of which were decoctions. Added to the festivities were countless fine homebrews, barbecued chicken and ribs, and perfect Colorado blue skies. The club looks forward to next year's Summer Brew-Off, and cordially invites inquiries from interested outdoor brewing enthusiasts. Contact: Bob Wood, 110 S. Limit St., Colorado Springs, CO 80905; (303) 520-0348.

Hop Barley and the Alers: Congratulations to Paul Carrier and Ken Peal, whose "Weizenbier No. 1" won the club third place in the AHA's Weiss is Nice contest in July.

The June meeting featured a talk on hops by Bill Hesse, complete with hop teas. Russell Schehrer, 1985 Homebrewer of the Year and brewmaster for Wynkoop Brewing Co. in Denver, spoke at the July meeting and provided samples of his beers for members to taste. HB&A was also treated to an unannounced visit by the Boston Wort Processors' Steve Stroud, who was in Boulder for a few days to brew his Hail to the Ale contest-winning India pale ale at the Boulder Brewing Co.

Denver's award-winning meadmaker Wayne Waananen gave a presentation on mead at the August meeting that featured samples of both his own and Charlie Papazian's meads. Waananen revealed that for his award-winning "Full Moon Mead" he pitched the yeast on a full moon, following a tip from professional meadmaker Leon Havill of New Zealand. Meetings are the fourth Thursday of the month in the tasting room at Boulder Brewing Co. Contact: Steve Feldberg, 708 Mohawk Drive, Apt. 10, Boulder, CO 80303; for phone inquiries, call Phil Fleming at (303) 469-9847.

CONNECTICUT

Beer Brewers of Central Connecticut (BBCC): Paul Prozeller hosted the August meeting, which featured a magnitude of rare and exotic Belgian ales that he carried back from several recent "business" trips to Belgium. The highlight was a 50-year-old whitewashed and corked bottle of gueuze that would have made a lemon pucker!

Phil "Barfly" Markowski's pilot brewery has passed both federal and state inspections for his employer, the New England Brewing Co. Barley Davidson wrote an interesting lead article in the September newsletter about breaking the 30-minute bottling barrier, using a combination of technology and Zen.

The BBCC puts considerable effort into its monthly 12-page newsletter, which includes not only technical articles but also many reviews, original cover art, poetry, short stories, cartoons, etc. They invite all interested clubs to start an exchange; individual subscriptions also are welcome. Contact: Judy Lawrence, Box 511, Marion, CT 06444; (203) 628-4693.

Dues are \$10. Meetings are the first Friday of each month at various locations. Contact: Ron Page, 21 Walnut St., Middletown, CT 06457; (203) 347-6777.

Underground Brewers' Club of South-eastern Connecticut: "Like the amoeba, we are trying to reproduce by division. Our geographic spread and the windy nature of Fairfield County roads suggest clubs in the Danbury, Bridgeport and Stamford areas might be viable. Thus, we have been holding three monthly meetings and are eager for new interested brewers to call," the Underground Brewers report. Annual dues are \$10 to help pay for entry fees in national and regional competitions. Contact: Pat

Baker, 11 Riverfield Drive, Weston, CT 06883; (203) 227-8028.

DISTRICT OF COLUMBIA

Brewers United for Real Potables (BURP) began the summer on a wheat-beer note. Eleven commercial Weizens were compared while host Ralph Bucca demonstrated his all-grain brewing technique. The result became BURP's Weiss is Nice contest entry. In July there were 15 entries in the club's all-extract "Summer Beer" contest. Andy Beaulieu and John Kleinhan won with their bountifully hopped "Liberation Pale Ale."

In August BURP hosted its annual crab feast, featuring plentiful homebrew, two bushels of steamed crabs and a keg of "Gold Cup Pilsener" donated by Virginia Brewing Co. Annual dues are \$12. Meetings are monthly at various members' homes in the Washington, D.C., area. Contact: John Gardiner, 7845 Heritage Drive, Annandale, VA 22003; (703) 256-5716.

FLORIDA

Beer Lords (formerly Palm Beach F.I.Z.Z.) are here to uphold and honor the traditions and techniques of brewing a righteous beer. They are looking for brewers of all levels, from neophytes to "Zen masters." Currently the club has 15 members. The \$25 annual dues include a club T-shirt. Meetings are held monthly at J.V.'s Cafe and Brewery in Palm Beach Gardens (a co-sponsor of the club). Contact: Dave Galloway, 3762 Milpond Court, Lake Worth, FL 33463; (407) 439-0142 (home) or (407) 624-2921 (work).

Central Florida Homebrewers: Meetings are the first Sunday of the month at the Winter Park Brewing Co. Contact: John Cheek, 1320 N. Semoran Blvd., Suite 101A, Orlando, FL 32807.

Escambia Bay Brewers: Club president Steve Fried, brewmaster at McGuire's Irish Pub and Brewery, announced that McGuire's is now offering free, fresh yeast slurry to local homebrewers. Annual dues are \$10. Contact: Steven J. Fried, 4544 Monpellier Drive, Pensacola, FL 32505; (904) 433-2379.

Florida Institute of Zealous Zymurgists (FIZZ) Dues are \$12 per household. Contact: Evelyn Robinson, 2626 S.W. 14th Ave., Ft. Lauderdale, FL 33315; (305) 764-1527.

Good Old Boys of Beer (GOBBS): Contact: Jerry Raymond, 205 Zaratoa Ave., St. Augustine, FL 32084; (904) 824-0122.

HAWAII

Hops—The Hawaii Beer Enthusiasts Club: Recent activities included guest speakers, a mashing demonstration (mahalo to Pat McMullen of Corvallis, Ore.) and of course, homebrew tasting. Meetings are the first Tuesday of every month at the Koolau Brewery's tasting room. Dues are \$15 per year, which cover the monthly newsletter and activities. Interested brewers, beer lovers and vacationing homebrewers are encouraged to contact Darin Sato, c/o MiniPubs Hawaii, 1427 Dillingham Blvd., Suite 208, Honolulu, HI 96817; (808) 842-0111.

IDAHO

Ida Quaffers Homebrewers Association: Meetings are the third Sunday of each month at various places. Annual dues are \$8. Contact: Loren Carter, 3401 Tamarack Drive, Boise, ID 83703; (208) 342-4775.

ILLINOIS

Chicago Beer Society: Contact: Chicago

Homebrew Club Champions 1989 Homebrew Club High Point Award Results

In the last issue we published the list of all the winners of the 1989 National Homebrew Competition. The winner of the Homebrew Club High Point Award went to Northern California's Sonoma Beerocrats for the fifth year in a row. The Beerocrats tallied up 14 points from the seven ribbons they won in the contest. We did not publish the names of the runners-up in the club competition. Since June several clubs have made the claim of winning second place. For the record, we decided it would be best to print the full list of clubs that were in the running for the 1989 club trophy in the order they finished.

- 1st Sonoma Beerocrats (14 points)**
- 2nd San Andreas Malts (9 points)**
- 3rd Foam Rangers (8 points)**
- 4th Beer Brewers of Central Connecticut (7 points)**
- 5th (tied with 5 points each)**
St. Louis Brews
Maltose Falcons
- 6th (tied with 4 points each)**
Brews Brothers
Valley Fermenters
Washoe Zephyr Zymurgists
Wisconsin Vintners Association

Other clubs whose members won prizes include: Brew Maxx, Brewtown Brewmasters, Dukes of Ale, Escambia Bay Brewers, Gold Country Brewers Association, Headhunters, Heartland Homebrew Club, High Desert Brewers, Ida-Quaffers, Kenosha Bidal Society, Madison Homebrewers and Tasters Guild, Old Pueblo Homebrewers, Oregon Brew Crew, Redwood Coast Brewers, Yolo County Brew Club and ZZ HOPS.

One recent development of importance for the 1990 Club Trophy is the AHA's new policy of awarding club points, toward the next club trophy to clubs placing in the top three of the AHA's four national club competitions—Weiss is Nice, Best of the Fest, Hail to the Ale and Bock is Best. Also important: Please note that clubs must be registered with the AHA at the time of competition in order to be eligible. Points cannot be awarded retroactively.

Beer Society, PO Box 1057, LaGrange Park, IL 60525; (312) 692-2337.

Egyptian Zymotic (EZ) Brewers: Contact: Doug Diggie, EZ Brewers, c/o Old Town Liquors, 514 S. Illinois Ave., Carbondale, IL 62901; (618) 457-3513.

Headhunters Brewing Club: Contact: Greg and Lynne Lawrence, Route 1, Box 64W, Sugar Grove, IL 60554; (312) 557-2523.

Northern Illinois Better Brewers Association (NIBBA): Contact: Jon Huettel, 2316 Oak St., Northbrook, IL 60062-5220; (312) 498-6154.

IOWA

Heartland Homebrew Club: Congratulations to Craig Olzenak for winning second place in the porters at the AHA National Competition with his "Prancing Pony Porter." He also participated in second-round judging at Fort Mitchell and recently achieved the honor of becoming Iowa's first Certified beer judge.

The Heartland club amassed a total of 32 ribbons at local competitions this past summer—19 at the Iowa State Fair and 13 at the Central Iowa Fair. Congratulations to John Hillier, who won best of show in the Central Iowa contest! Annual dues are \$12 per household. Contact: Craig Olzenak, 1030 High St., Grinnell, IA 50112; (515) 236-4033.

KANSAS

Greater Topeka Hall of Foamers held their Summerfest in July with 40 members and guests attending. Featured were Jim Madl's famous smoked turkey and eight kegs of outstanding homebrew. Dues are \$15. The club meets the second Wednesday of each month at Bethany Place, 833 S.W. Polk, Topeka. Contact: John Anschutz, 1265 SW College Ave., Topeka, KS 66604, (913) 232-8630.

Kansas City Bier Meisters were very busy during the summer. The June meeting featured a presentation on yeast by Alberta Rager. July featured two videotapes, one on California microbreweries and the other an incomplete KCBM production by Ed Walker, Bryan Conry and Jackie Rager designed to assist the novice brewer. Having just returned from spending the summer abroad, Curt Hulse gave presentations on beers of Belgium and low-alcohol beer in August.

The newly instituted "Disorder of the Month" program has proved to be very informative and a lot of fun. Alberta Rager discussed diacetyl in July and DMS in August. September burst out with a discussion and demonstration of gushing by Kirstin Pedersen, followed by a talk on carbonation by Alberta Rager. Dues are \$15. Meetings are the second Friday of the month at the Soroptomist Community Center in Mission. Contact: Alberta Rager, 5531 Reeds Road, Mission, KS 66202; (913) 236-5953.

Rapsallions: Meetings are the third Saturday of the month. Contact: Richard or Jillian Seaton, 1115 N. Waco, Wichita, KS 67203; (316) 265-4060.

Southeast Kansas Homebrewers Association: Contact: Ben Fox, 611 N. Mulberry, Eureka, KS 67045; (316) 583-7256.

KENTUCKY

Kentucky Homebrewers Association: The club's informal meetings provide a medium for exchange of recipes, techniques and of course, homebrew. KHA is sponsored by Heidenreich's Homebrew Wine and Beer Supply. Contact: Joseph A. Heidenreich, 6363 Athens-Boonesboro Road, Lexington, KY 40509; (606) 263-9841.

LOUISIANA

Bayou Brewers: Contact: Bill Vollenweider, c/o 190 Specialties, 10553 Florida Blvd.,



The Boston Wort Processors. Taken at their Annual Picnic, July 1989. We'd like to know the name of the small furry member, 2nd row, right of center.

Denham Springs, LA 70726; (504) 665-3226 and (504) 664-8034.

Crescent City Homebrewers: CCH is issuing a "World's Longest Beer Run" challenge to other clubs to hold similar raffles with the winners meeting the same weekend in Munich. It could happen to you. For information on the logistics of such a venture, contact Guy Hagner, 5855 Walnut Creek, Apt. A-301, Harahan, LA 70123; (504) 733-3932 (home) or (504) 822-8711 (work). Club contact: Mike Biggs, 1928 Metairie Heights, Metairie, LA 70001; (504) 833-6140.

Mid-City Mashing Society: Peter Cad-doo brewed 17 gallons of Oktoberfest for the German Heritage Parade on Sept. 23. Other members were preparing Doppelbock, Münchner Helles, Vienna and Pils beers using identical ingredients—Ireks malt, Hallertauer hops and good ol' Mississippi tap water—and cultures of the same yeast. Contact: Peter Cadoo, 341 Octavia, New Orleans, LA, 70115; (504) 891-9728.

MAINE

Belfast Area Brewers: Dues are \$5 per year "or until the money runs out." Meetings are usually the third Thursday of the month in members' homes. Contact: Bruce Gillett, RR3, Box 789, Belfast, ME 04915; (207) 338-5680.

Brewster Associates: Contact: Paul Turcotte, RR1, Box 969, Monmouth, ME 04259; (207) 268-4480 (h), (207) 623-6778 (w).

M.A.L.T. (Maine Ale and Lager Tasters): The August meeting featured lively discussion among brewers of all levels, including eight prospective new members. Andrea Doyle of the Purple Foot homebrew shop in Waldoboro demonstrated kegging techniques. Plans include a field trip to Portland's Gritty McDuff's brewpub. Meetings are the last Monday of the month. Dues are \$10 annually. Contact: Michael LaCharite, 6 Madelyn Ave., Topsham, ME 04086; (207) 729-0225.

Seacoast Homebrewers: Contact: Seacoast Homebrewers Club, RD 3 Box 149, Kennebunkport, ME 04046.

MASSACHUSETTS

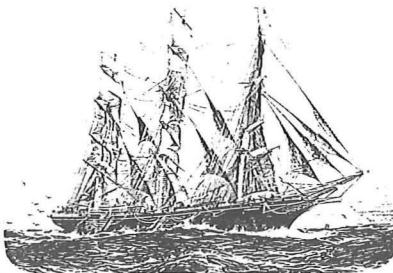
The Wort Processors won their fifth victory in seven attempts at AHA national club competitions when Bill Murphy won the Weiss is Nice competition in August. Ron and Jean Vavriska hosted the annual club picnic, which drew more than 50 revelers in early July.

In late August about two dozen Worts joined members of the Boston Beer Society, the Underground Brewers' Club of Southeastern Connecticut and the Beer Brewers of Central

HEAR YE! HEAR YE!

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American Homebrewers Association
734 Pearl St.
Boulder, CO 80302
Call (303) 447-0816 for details and rules.

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Connecticut for the first annual "Boston Pub Crawl." Crawlers started the day with a tour of the Boston Beer Co. and then sampled brews at seven of the area's finest beer bars.

Annual dues are \$10. Meetings are the first Friday of the month at members' homes. Contact: Tom Ayres, 65 Langdon St., Apt. 6, Cambridge, MA 02138; (617) 354-4326.

The **Gambrinus Society** is interested in hearing from Central Massachusetts homebrewers. The club meets the second Saturday night of each month at members' homes. Activities include an annual picnic and occasional field trips. The Society has no dues and no officers. Contact: Herbert Holmes, 16 Marsh Road., Barre, MA 01005-0168; (508) 355-2753.

Valley Fermenters: Annual dues are \$10. Contact: Steven G. Budd, 482 W. Mountain Road, Bernardston, MA 01337; (413) 648-9393.

MICHIGAN

Ann Arbor Brewers Guild held a successful Beerbecue in July. August's meeting was at Steve Klobukowski's, where members realized it's time to get started on brewing the high-gravity celebration beers for the December meeting. Brewers in southeastern Michigan are asked to drop a line! Dues are \$5. Contact: Rolf Wucherer, 1404 White, Ann Arbor, MI 48104; (313) 663-8196.

Brewers of Zymotic Omnivorous Suds (BOZOS): New Bozos are always welcome. Contact: Ann Tarr, 41 Holmdene N.E., Grand Rapids, MI 49503; (616) 458-3294.

MINNESOTA

Bosso Brewing Company's rapidly expanding membership is straining the capacity of the Bosso Subterranean Blues Bar (& Sometimes

Grill) as a meeting place for the club. Over 20 different beers were tasted at the last meeting, most of them homebrews. Palate fatigue syndrome was experienced by all in attendance.

Plans include a session on the pros, cons and how-to's of wort chillers and tours of local microbreweries. Meetings are at the Bosso Subterranean Blues Bar located in Martin Henschel's basement. Contact: Darlene Joyer, 1397 James Ave., St. Paul, MN 55105; (612) 699-6864.

Northern Ale Stars Homebrewers Guild: John Judd, Kelly Kuehl and Don Hoag attended the AHA National Conference at the Oldenberg Brewery in Kentucky. On Club Night they served a Weizen beer donated by the club.

The annual Oktoberfest was in September. Special guest Ted Marti, president and brewmaster at August Schell Brewing Co. in New Ulm, provided beer samples and held a question-and-answer session with members. Annual dues are \$10. Contact: Don Hoag, 5426 Beartrap Road, Saginaw, MN 55779; (218) 729-6302.

MISSOURI

Missouri Winemaking Society: Contact: Paul Hendricks, 190 Pueblo, Florissant, MO 63033; (314) 837-4639.

St. Louis Brews: Dues are \$10 per year. Contact: Bacchus and Barleycorn, 7352 Manchester Ave., Suite 100, St. Louis, MO 63143; (314) 644-4664.

MONTANA

Zoo City Zymurgists: Dues are \$15. Meetings are the second Saturday of each month. Contact: Jim Lueders, 201 South Ave. West, Missoula, MT 59801; (406) 721-1919.

NEVADA

Washoe Zephyr Zymurgists: Contact: Bill and Sue Marble, 11670 Fir, Reno, NV 89506; (702) 972-7438.

NEW JERSEY

Mid-Atlantic Sudsers and Hoppers (MASH): Contact: Mark Bernick, RRI, Box 641-1, Greenwood Lake, NY 10925; (914) 477-8729.

NEW MEXICO

Dukes of Ale: Congratulations to Dan Baumann, who won best of show at the New Mexico State Fair homebrew competition with his Sierra Blanca Weizen, and to Guy Ruth, who won second place in the specialty ale category of the 1989 AHA National Competition with his "Todo la Tienda." The Dukes caravanned to the Great American Beer Festival in October.

The Dukes of Ale meet the first Friday of the month at members' homes. Each meeting consists of business and a talk on brewing followed by samplings of top-fermented and bottom-fermented beer styles. Each meeting is videotaped. There are no membership dues. Contact: Guy Ruth, 11524 Manitoba N.E., Albuquerque, NM 87111; (505) 294-0302 (home) or (505) 848-5366 (work).

NEW YORK

Amateur Brewers of Central New York: Dues are \$15. Meetings are the third Monday of the month at Danzers Restaurant. Contact: Dick Goyer, 301 Wellington Road, Dewitt, NY 13214-2238; (315) 446-4755 (evenings) or (315) 472-6233 (days).

Broome County Fermenters Association: Dues are \$10. Contact: Roger Haggett, 223 Ridgefield Road, Endicott, NY 13760; (607) 785-3676.

Long Island Brewers Association (LI-BATION): Three members attended the AHA Conference in Fort Mitchell, Ky., in June. The club has no dues and no officers. Meetings are the second Tuesday of the month at Mr. Fadeley's Deli-Pub in Patchogue. Contact: Arnie Moodenbaugh, 247 N. Titmus Drive, Massena, NY 11950; (516) 281-0152.

New York City Homebrewers Guild: Charlie Papazian's recent visit to NYC was a hit. Results of the regular homebrew competitions and entry forms for upcoming competitions are available at meetings or through the mailing address. "The Written Wort" newsletter is available by subscription. Adopt-a-brewer networking, homebrewers' hotline, special events and much froth-blowing also are available through the Guild. Annual dues of \$20 per year include the club magazine. Meetings are at Brewsky's every second Tuesday. Contact: Morgan Wright, PO Box 559, Madison Square Station, New York, NY 10159.

Outlaws of Homebrew "came, saw and kicked donkey" at the NYC Homebrew Guild's summer competition. Stalwart Outlaws Keith Cunningham and Dave Durbin took best of show with their incomparable steam beer. Judges were Brooklyn Brewery owners and founders Steve Hindy and Tom Potter and Brewmaster Bill Moeller, formerly of Christian Schmidt.

At presstime the club was planning for its first annual "Outlaws' Oktoberfest," and they promise similar "debaucheries and zymurgistic necromancy" for their "Outlaws' May Day" celebration. Officers are John Quinn, brewmaster; Jeff Lewis, assistant brewmaster; Eileen Reilly, scrivener; Sal Pannaccio, minister of finance. Contact: John Quinn and Eileen Reilly, 5630



Charlie Papazian visiting with the New York City Homebrewers Guild.

Amboy Road, Staten Island, NY 10309; (718) 317-6728.

Sultans of Swig: Contact: Tim Herzog, 412 Lamarck Drive, Cheektowaga, NY 14225; (716) 837-7658.

Troy Homebrewers Club: Contact: Dan Hennessy, PO Box 352, Troy, NY 12180; (518) 283-7094.

Upstate New York Homebrewers Association: Dues are \$20. Meetings are the second Wednesday of the month at the Hof Brau Haus, Rochester. Contact: Turk Thomas, 2 Beverly Drive, Brockport, NY 14420-1102; (716) 637-9441.

NORTH CAROLINA

Alternative Brewers: Dues are \$12. Meetings are on the second Saturday of the month at the Dilworth Brewery in Charlotte. Contact: Isaac Fleming, 114 Freeland Lane, Suite O, Charlotte, NC 28217; (704) 527-2337.

Triangle Unabashed Home Brewers (TRUB): Annual dues are \$15. Meetings are the second Wednesday of each month. Contact: Rick Rinehart, 1904 Ulmstead Road, Durham, NC 27704; (919) 383-9221.

OHIO

Dayton Regional Amateur Fermentation Technologists (DRAFT): Contact: Patrick Pickett, 109 Oakview Drive, Kettering, OH 45429, (513) 293-3019.

OKLAHOMA

Fellowship of Oklahoma Ale Makers (FOAM): Contact: Bruce Lemmon, 2627 E. 14th St., Tulsa, OK 74104.

OREGON

Cascade Brewers Society: Annual dues are \$10 and meetings are the second Monday of each month. Contact: Scott Weech, 26654 Pickens, Eugene, OR 97402; (503) 935-7074.

Heart of the Valley Homebrewers: Contact: Daniel Mumford, 1865 1/2 N.E. Sealy Ave., Corvallis, OR 97330; (503) 753-3708.

Hopheads: Contact: Charlie Hawks, 1757 S.E. Kane, Roseburg, OR 97470.

Oregon Brew Crew: Congratulations to Steve Morelli and Pete Jelinik, who both won ribbons at the 1989 AHA National Homebrew Competition. Also congratulations to Jon Morgan, whose wheat beer took best-of-show at the third annual Oregon State Fair.

Members were busy this summer judging at various regional competitions, some traveling as far as Anacortes and Puyallup, Wash., to lend their palates.

The Brew Crew recruited and organized more than 300 volunteers for the second Oregon Brewers Festival in July, which drew 18,000 people to taste beers from 35 microbreweries and brewpubs across the U.S. and Canada. Another summer highlight was the annual hopyard tour near Mt. Angel. Annual dues are \$12. Contact: Jeff Frane, PO Box 42435, Portland, OR 97242; (503) 238-4894 (days) or (503) 639-8072 (evenings).

Society for Upgrading Drinkable Spirits (SUDS): Dues are \$12.50 and subscriptions to the *Suds-Line* are \$3.75. Contact: Kerry Carpenter, 1717 Main St., Baker, OR 97814; (503) 523-5057.

PENNSYLVANIA

Happy Valley Homebrewers: Annual dues are \$12. Contact Pat Hayes, 311 S. Allen St., Suite 117, State College, PA 16801; (814) 466-6774 after 9 p.m.

Homebrewers of Philadelphia and Suburbs (HOPS): Contact: Richard Gleeson, 344 S. Taylor Ave., Crum Lynne, PA 19022; (215) 833-2357.

Three Rivers Alliance of Serious Homebrewers (TRASH): Contact: Greg Walz, 3327 Allendorf St., Pittsburgh, PA 15204; (412) 331-5645.

RHODE ISLAND

Rhode Island Association of Brewers: see listing under *New Clubs*.

SOUTH CAROLINA

Hopportunityists: Contact: Tom King, Rt. 1, Box 226, West Union, SC 29696; (803) 638-6331.

TENNESSEE

East Tennessee Brewers Guild: Dues are \$5. Meetings are the first Tuesday following the first Monday of each month at various members' homes. Contact: Steve Railsback, RRI, Lenoir City, TN 37771; (615) 986-0526.

Hillbilly Hoppers Homebrew Club: Dues are \$12 per year. Contact: Ron Downer, 4955 Ball Camp Pike, Knoxville, TN 37921; (615) 523-4615.

TEXAS

Amarillo Homebrewers: Contact: Richard Deford, c/o North Texas Fermentables, 708 W. 16th, Amarillo, TX 79101 at (806) 353-9461 or Jim Reese at (806) 359-3356 or 376-1861.

Arlington Homebrewers: Contact: Herschel Gibbs, 3201 W. Division, Arlington, TX 76012; (817) 860-8430.

Bock 'n' Ale-ians are having fun now. Two members, Allen Ford and Paul Farnsworth, recently set up liquid yeast culturing kits for the club. They acquired lab equipment and supplies and a slant of yeast and the other members pitched in to cover the costs. Paul prepared written instructions and kept it simple—otherwise, according to the club, "We wouldn't be having so much fun." Since then the club reports a marked improvement in their beers, adding that, "No longer is there that characteristic homebrew tinge of dried yeast. Well, almost never."

The club has no dues and no officers. Meetings are the first Sunday of each month at Hill and Dales Ice House. Contact: Albert Hymer, 1932 W. Huisache, San Antonio, TX 78201; (512) 734-8723.

Brew Maxx Homebrew Club: Contact: Scott Brown, 6702 Susie Road, Amarillo, TX 79119; (806) 655-2330.

Cowtown Cappers: Contact: Rob Stenson, c/o the Winemaker Shop, 3132 W. Seventh St., Fort Worth, TX 76107; (817) 877-1277.

Foam Rangers got together in September to tie-dye the T-shirts for the sixth annual Dixie Cup—"Wortstock '89, Three Days of Peace, Love and Homebrew"—scheduled for October, rendering each one...unique. Plans for the remainder of '89 included a trip to the local Renaissance Festival.

Dues are \$15. Meetings are the third Friday of each month. "Stop by DeFalco's or a club meeting," say the Rangers. "You don't have to be a homebrewer to be a member. Anyone who appreciates good beer is more than welcome on any occasion." Contact: Brad Kraus, c/o DeFalco's Home Wine and Beer Supplies, 5611 Morningside Drive, Houston, TX 77005; (713) 523-8154.

Malthoppers Beer Club: Contact: Lili Lyddon, PO Box 9560, College Station, TX 77842; (409) 693-6699.

North Texas Homebrewers Association is excited about the Homebrewers Alliance's choice of Dallas for the location of their annual conference, scheduled March 28-31, in conjunction with the fourth annual Bluebonnet Competition.

Monthly meetings are loosely based around a chosen beer style, with homebrew, ingredients and discussions appropriate to that style. The monthly newsletter, "Living the Brews", keeps the 50 members informed of what's happening. Club brew-ins happen regularly at DeFalco's. Annual dues are \$12. Meetings are the second Tuesday of each month at DeFalco's Wine and House Beer in Dallas. Contact: Paul Seaward, 6008 Lovers Lane, Apt. 212, Dallas, TX 75206; (214) 369-1703.

UTAH

Zion Zymurgists Hops (ZZ HOPS): Contact: John Smolley, 2859 Glen Oaks Drive, Salt Lake City, UT 84109; (801) 486-4684.

VIRGINIA

Hampton Roads Brewing and Tasting Society: Recent meetings have been held several places, including the newly opened International Festhaus brewpub in Virginia Beach, British Accent, Virginia Brewing Co., Wine and Cake Hobbies and Henry's Seafood Restaurant. The club's 40-plus members represent the cities of Virginia Beach, Norfolk, Portsmouth, Chesapeake, Newport News, Hampton and Williamsburg. The club meets the first Wednesday of each month. Dues are \$12 per year. Contact: Ron Young, 2301 Kingsman Lane, Virginia Beach, VA 23456; (804) 427-5695.

James River Homebrewers: Contact: Gary Tolley, 1401 Stone River Road, Richmond, VA 23235; (804) 276-0306.

WASHINGTON

Brews Brothers: Contact Craig Harris, 324 29th Ave. E., Seattle, WA 98112; (206) 329-2452.



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Seattle, WA 98133

Fidalgo Island Brewers: Dues are \$12 per year. Contact: Don Harper, 1218 27th Court, Anacortes, WA 98221; (206) 293-4278.

WEST VIRGINIA

Laggards: Contact: Bradford E. Hornick, 516 N. Main Ave., Weston, WV 26452; (304) 269-2701.

Maltainers: They have no officers or dues, but they do meet monthly at the Foxfire Restaurant in Morgantown, W.V. Contact: Jim Plitt, Stone's Throw, 171 Walnut St., Morgantown, WV 26505; (304) 296-1960.

WISCONSIN

Bidal Society of Kenosha: Meetings are the third Thursday of the month, rotating among members' homes. Dues are \$3 per month. Contact: Dennis Minikel, 5505 63rd St., Kenosha, WI 53142-3050; (414) 656-1871.

Brewtown Brewmasters: Congratulations to Rande Reed and Bob Burko on bringing home ribbons from the National Homebrew Competition in Fort Mitchell, Ky., in June. Also congratulations to Jim Surwillow on being accepted at the Siebel Institute for Brewing Technology.

The July meeting featured slides of the AHA National Conference in Fort Mitchell. Club members also enjoyed a barbecue and a keg of the Lakefront Brewery's Riverwest Stein Beer. "Wower of the Month" went to Mark Meddaugh for his superb Cherry Mead. For the August meeting the Brewmasters toured Milwaukee's Sprecher Brewery where Rande Reed, a Sprecher employee, was the club's tour guide.

There are no dues and no officers. Meetings are monthly at The Basement Brewmaster in Brookfield. Contact: Mark May, The Basement Brewmaster, 4280 N. 160th, Brookfield, WI 53005; (414) 781-2739.

Central Wisconsin Amateur Wine-makers' Club: Contact: Tom Bauer, 112 W. Fifth, Marshfield, WI 54449.

Madison Homebrewers and Tasters Guild: Annual dues are \$10. Meetings are every Wednesday at the Fess (in the Rathskeller). Contact: Mark Kessenich, 141 N. Hancock St., Madison, WI 53703; (608) 256-2107.

Wisconsin Vintners' Association: Contact: John Rauenbuehler, 6100 N. Kent, Whitefish Bay, WI 53217; (414) 964-2098.

CANADA

Amateur Winemakers of Ontario (AWO): Subscription rates are \$6 per year for members and \$9 for nonmembers. Contact: Paul Jean Jr., AWO News, 28 Otten Drive, Nepean, Ontario K2J 1J2, Canada; (613) 825-3229.

Thunder Bay Home Brewers' Association: The local Renegade Brewery has been of great help to the club and the monthly meetings are in the brewery's courtesy lounge. The club held its first competition in January. Contact: Bruce Holm, RR 15, S. 9, C. 51, Thunder Bay, Ontario P7B 5N1, Canada.

AUSTRALIA

Amateur Brewers Association of Victoria: After a series of poor meeting attendances ABAV decided to hold a beer judging, which resulted in the highest meeting attendance in three years. Winners included B. Hastings, R. Whitlum, R. Young and T. Earl.

Yeasts from M. eV. Research were distributed at the July meeting. Hops from Tasmania were distributed at the August meeting. Meetings are the last Thursday of each month.

Annual subscriptions are \$10. Contact: Barry Hastings, 10 Aston Heath, Glen Waverly, Victoria 3150, Australia; 561-4603.

NEW ZEALAND

Auckland Guild of Winemakers and Brewers: Congratulations to Betty Neve on her silver medal for sweet citrus wine and bronze medals in dry citrus and sweet red berry wines at the Hibiscus club competition in July.

The June meeting featured guest speaker John Richardson, cellar manager for Dominion Brewers. He gave an interesting talk and showed a video of Britain's brewing industry. He said that there are more than 1,000 products brewed in Britain. Planned for October was a talk on the making of herb and flower wines.

Meetings are the fourth Wednesday of each month except December. Membership dues are \$14 for single, \$20 for double or family. Contact: Hec Denniston, 426 Sandringham Road, Auckland 3, New Zealand; Auckland 868-428.

Far North Region Amateur Brewers and Vintners Club will celebrate its 10-year anniversary this year with a dinner dance in May. Membership is growing (currently 47) and consists mostly of retired persons but with an increasing number of younger married couples. Club funds are maintained with raffles of home produce, toys, fruit, jams, etc., which members donate.

The increasing popularity of kit beers is starting to decimate the older traditional brews in competitions, but members also notice some experimentation with kits appearing. Dues are \$3 for individuals and \$5 for families. Meetings are the second Sunday of the month at the Mangonui Memorial Hall. Contact: Carl Sopp, Cable Bay Road, Coopers Beach, RD3, Kaitaia 0500, New Zealand, telephone std (0889) 60803 MGI.

Hamilton Brewers and Winemakers: The club meets on the first Tuesday of each month at the Ruakura Research Centre in the Social Club Rooms. Contact: Barry Whiteley, 122 Fairview St., Hamilton, New Zealand; (0889) 60803 MGI.

Hibiscus Amateur Winemakers and Brewers Guild is hosting the Northern Regional convention and competitions at Orewa on Aug. 10 and 11. The weekend begins Friday with judging of competition entries at 9 a.m. and an evening welcome with tastings and light refreshments. There will be a short tour on Saturday with Social and Prizegiving beginning with happy hour, and dinner and dancing until midnight. The competitions are open to affiliated clubs of the Northern Region only, but visitors to the social functions will be most welcome. Accommodations can be arranged on request. Contact: Jessie Evans, 111 Whangaparaoa Road, Orewa, Auckland, New Zealand; telephone: Hibiscus Coast 65314

Manukau Winemakers and Apiarists Club: Contact: Basil Dempsey, 18 Picton St., Papatoetoe, New Zealand; telephone: Auckland 2785453.

New Zealand Amateur Winemakers and Brewers Federation announces the seventh New Zealand National Competitions January 1990. AHA members who might be in New Zealand will be welcome to attend these competitions in the sunny state of Nelson on the South Island. January is the peak of their summer vacation period and Nelson, with its popular beaches, is a great holiday resort as well as being New Zealand's largest hop-growing district.

The National Competition will be Jan. 12 to 14. "We would be pleased to see you," says Vic Whyman, chairman. Contact: Marie or Brian Stephens at 4 Churchill Ave., Richmond, New Zealand, or call the Nelson Boys College during the above dates.

BOOKS

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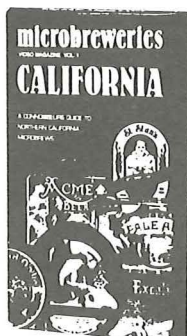
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continued from page 63

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Enter the 1990 Twelfth Annual American Homebrewers Association's National Homebrew Competition

Entry deadline is April 24, 1990. Preliminary judging takes place April 25 to May 18 in Boulder, Colorado. Finals will be judged June 13 in Oakland, California. Complete details, registration forms, rules and regulations will appear in the Spring 1990 issue of *zymurgy* magazine, which members should receive by mid-March. (See below for advance information requests.)

Here are a few rules to keep in mind:

- For the Preliminary judging all entrants must submit **one** 10- to 14-ounce green or brown glass bottles. Wire and porcelain swing tops and corks are not acceptable closures. Use only crown caps. Contestants are encouraged to use 12-ounce brown longneck beer bottles for maximum protection from light and breakage. Bottles with raised glass designs, embossing or silkscreened labels are not acceptable.
- If your beer is judged to move on to the Final judging you will be notified by first-class mail during the week of May 20. You will be instructed on how, when and where to send two additional bottles for judging, to be received in California no later than June 2. **NOTE:** Three bottles of beer for final judging will be requested for certain categories (see below).
- Entrants may not submit more than one entry in any one subcategory.
- Selected AHA Sanctioned Competition winners may automatically qualify for Second Round judging. Contact: AHA Sanctioned Competition Program Director.

Awards will be made in each of the following 22 Ale and Lager Classes and two Mead Classes. Entrants must place entry in listed subcategories. Entrants in each subcategory within a Class will compete for First, Second and Third Place in each Class. First, Second and Third place will not be given for each subcategory, **except** where noted below.

First Place winners of each Lager and Ale Class will compete in a Best of Show judging. The winner will be awarded "Homebrewer of the Year."

There will be a Homebrew Club High-Point Award given.

First Place winners of each Mead Class will compete in a Best Mead of Show judging. The winner will be awarded "Meadmaker of the Year."

***NOTE:** First, Second and Third Place will be awarded in the pale ale subcategories. The best of each subcategory will compete in an extra round of judging for First, Second and Third Place in its Class. Entrants in this category will be required to submit three bottles for the final judging.

ALES		LAGERS	
CLASS	SUBCATEGORIES	CLASS	SUBCATEGORIES
Alt	1a) German Altbier 1b) Kölsch	Bock	14a) Traditional German Bock 14b) Helles (light) Bock 14c) Doppelbock 14d) Eisbock 14e) Weizenbock
Barley Wine	2a) Barley Wine Ale	Continental Dark	15a) Continental Dark
Belgium-style Specialty Beers	3a) Flanders Brown Ales 3b) Trappist Ales 3c) Saison 3d) Lambic	Export	16a) Export
Brown Ales	4a) Brown Ales 4b) English Mild 4c) Texas Brown	Fruit Beer	6b) Fruit lager judged with Fruit Ales
Cream Ale	5a) Cream Ale	Herb Beer	7b) Herb lager judged with Herb Ales
Fruit Beer	6a) Fruit Ale	Munich	17a) Munich Helles (light) 17b) Munich Dunkel (dark)
Herb Beer	7a) Herb Ale	Pilsener	18a) Diet/Lite Pilsener 18b) American Pilsener 18c) Continental Pilsener
Pale Ale	8a) Classic Pale Ale *see note above 8b) India Pale Ale *see note above 8c) British Bitter *see note above	Porter	9b) Judged with Porter (ales)
Porter	9a) Porter	Rauch	19a) German Rauchbier (smoked)
Scotch Ale	10a) Light Scotch Ale 10b) Heavy Scotch Ale 10c) Export Scotch Ale 10d) Strong Scotch Ale	Specialty Lagers	11b) Judged with Specialty Ales
Specialty Ales	11a) Specialty Ales will be judged with Specialty Lagers as one class	Steam	20a) American Steam Beer
Stout	12a) Dry Stout 12b) Sweet Stout 12c) Imperial Stout	Vienna	21a) Vienna Lager
Wheat Beers	13a) German-style Berliner Weisse 13b) German-style Weizen 13c) German-style Dunkel (Dark) Weizen 13d) American Wheat Beer *NEW	MEAD	
		Traditional Mead (no flavorings)	22a) Sparkling Traditional 22b) Still Traditional
		Melomel, Pyment, Cyser, Metheglins	23a) Sparkling Flavored 23b) Still Flavored

Additional information will be sent to all active members of the American Homebrewers Association by mid-March, 1990. Advance information is available on request, but request must be accompanied by self-addressed, stamped (45 cents), business-sized envelope. Call or write the American Homebrewers Association, PO Box 287, Boulder, CO 80306 USA, (303) 447-0816.

A Complete Look at Lager Brewing and Decoction Mashing

Brewing Lager Beer

By Gregory J. Noonan

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Part 2: The Brewing Process

Next, Greg guides you through the entire brewing process from planning to bottling the beer.

Chapters include Malting (Steeping, Germination and Kilning); Crushing the Malt; Mashing (a complete discussion and directions for decoction mashing); Boiling the Wort (Boiling Hops, Hops Rates, Hot and Cold Breaks, Finishing Hops and

Straining and Cooling the Wort); Primary Fermentation (Kraeusening, Pitching the Yeast, Temperature Control, Balling, Real and Apparent Attenuation and Racking); Secondary Fermentation (Lagering, Fining, Real Terminal Extract); Bottling; and Imbibing. A special section also discusses Cleaning and Sterilizing Equipment.

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