

FOR THE HOMEBREWER AND BEER LOVER

# Zymurgy

Vol. 14, No. 2  
Summer 1991

Published by the American Homebrewers Association

**Catch the Homebrew Bug!**



**Clarify Cloudy Beer  
Regulate Your Racking  
Improve Beginning Brews  
Heat Your Beer, Not Your House  
Eleven Recipes • Four Kit Reviews**

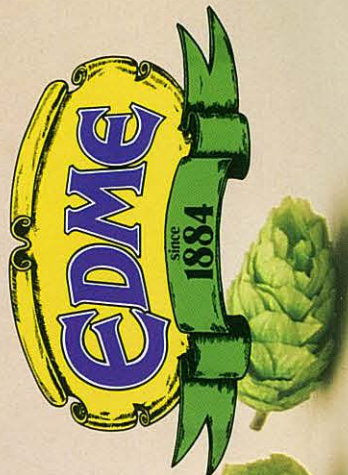


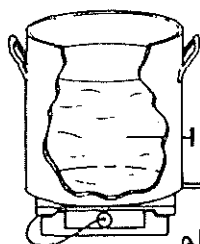
# BREW THE WINNER

EDME MALT EXTRACT, THE CRITICS CHOICE,  
HAS BEEN ACCLAIMED IN REVIEW AFTER  
REVIEW BY AMERICAN HOME BREW EXPERTS.

EDME HAS BEEN PRODUCING MALT EXTRACT  
FOR OVER 100 YEARS, USING THE FINEST  
BARLEY FROM THE HEART OF THE ENGLISH  
COUNTRYSIDE.

EDME MAKES A WIDE RANGE OF BEERS FOR  
YOU TO BREW, SO WHETHER YOU CHOOSE A  
PALE LAGER OR A DEEP STOUT, YOU CAN  
BE SURE OF A WINNER EVERY TIME.





# GRAIN BREWERS !

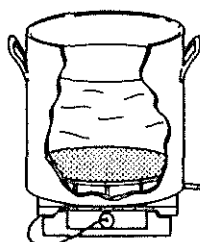
15 GALLON - 3 VESSEL

## GRAVITY-FEED BREWING SYSTEM

- STAINLESS STEEL
- 1 & 2 VESSEL SYSTEMS ALSO AVAILABLE

We can customize your vessels to your specifications

All fabrication is done in-house

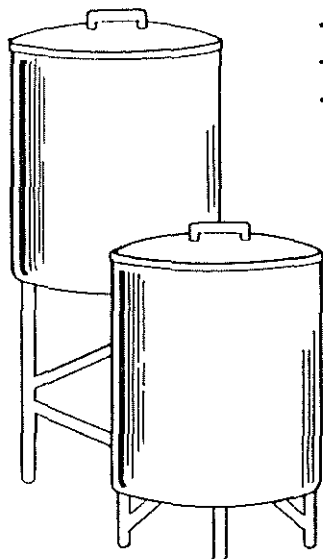


System shown includes Sparge Water Vessel, Mash-Lauter Vessel, and Boiling Vessel

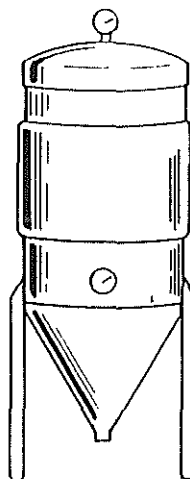
**NEW!**

## PILOT OR PUB BREWING SYSTEMS

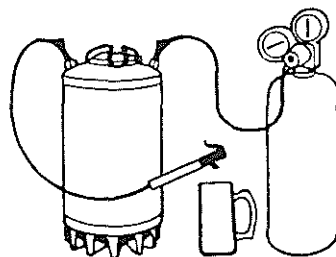
- STAINLESS STEEL
- 1 & 2 BARREL SYSTEMS
- LARGER SIZES AVAILABLE



Mash-Lauter Vessel  
Boiling Vessel  
Cylindroconical Fermenter with Chill Band and Temperature Controller  
Sanitary stainless steel valves throughout  
System includes 2 Pumps



## STAINLESS STEEL KEGGING SYSTEMS



3 gal. and 5 gal. kegs available

Eliminates bottling

We sell complete systems or parts

All parts are standard

## BREWING STOVE

Portable propane stove

35,000 BTU output

12 x 12 inch cast iron grate

Rugged; well constructed

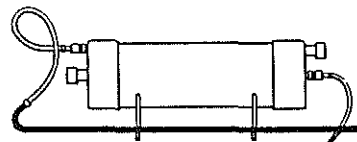
## STAINLESS STEEL BREWING POTS

5, 10, and 15 gal. capacity

Heavy restaurant grade

Lid included

## WORT CHILLER



High-grade copper coil contained in waterproof shell

Wort is cooled by flowing through copper coil while water flows through the unit and around the coil

Compact and efficient

Easily sterilized

Comes with all hoses and copper siphon tube

COMPLETE BREWING SUPPLIES & EQUIPMENT - FAST MAIL ORDER SERVICE

SEND \$4.00 FOR COMPLETE CATALOG - DEDUCTIBLE FROM ORDER

BREWERS WAREHOUSE 4520 UNION BAY PL. N.E. SEATTLE, WA 98105 (206) 527-5047





# BEER DRINKERS OF AMERICA WANTS YOU!

**J**oin hundreds of thousands of Americans who defend their freedom to drink beer free of excessive taxes and other unfair restrictions. Join our fight to prevent radical special interest groups from imposing their will on the nation's 80 million beer consumers.

As a Beer Drinkers of America member, you're part of an exciting and fast-growing consumer group with a history of success in the tough grassroots political arena. You're also one of the huge majority of beer consumers who practices moderation and personal responsibility when you drink.

So raise a toast to the "Freedom to Enjoy"—and call 1-800-441-BEER today to join Beer Drinkers of America.



**Call 1-800-441-BEER**

150 Paularino Ave., Suite 190, Costa Mesa, CA 92626



## SUMMER 1991 CONTENTS

### SPECIAL ARTICLES

#### **23 Ten Years of the Great American Beer Festival**

By Dan Fink

#### **26 Don't You Know There's a War Going On?**

By George A. O'Brien

#### **30 Pilsner Urquell: The Brewery**

*Uncovering the Unusual*

By Darryl Richman

#### **34 Beginners's Luck**

By Rob Brook

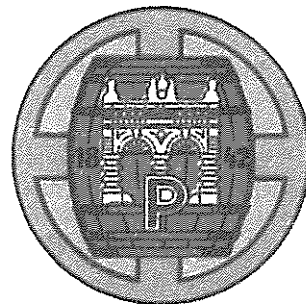
#### **41 Counterpressure Transfer**

*Rack Your Beer Without Losing the Fizz*

By Dan Fink

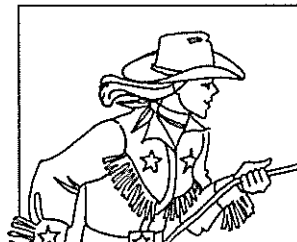
#### **1991 Membership Survey**

*(between pages 16 and 17)*



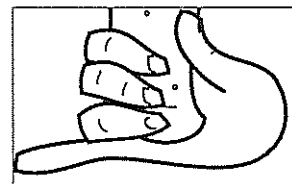
**Page 30**

*Czech out a unique brewery*



**Page 59**

*Catch that ale!*



**Page 72**

*Get yer pinky fingers out!*

### REGULAR FEATURES

5 Editorial	19 Jackson on Beer	58 Reviews
7 Dear zymurgy	21 Homebrew Cooking	59 World of Worts
10 Association News	43 For the Beginner	61 Homebrew Clubs
14 Brew News	46 Winners Circle	67 The Homebrew Connection
15 Calendar of Events	51 Dear Professor	69 Classified
18 AHA Sponsors	55 The Best from Kits	72 The Last Drop

Cover photo by Michael Lichter, Michael Lichter Photography. Thanks to Thom Tomlinson of Hop Barley & the Alers homebrew club and Jenny Wolcott (models), Demian Baum and Philippa Hollands (Volkswagen), Colonel John's Homebrew Supply, Liquor Mart and Clare Corcoran.

# Zymurgy

**Editor-in-Chief** *Charlie Papazian*  
**Associate Editor** *Elizabeth Gold*  
**Managing Editor** *Kathy McClurg*  
**Assistant Editor** *Lois Canaday*  
**News Editor** *Dan Fink*

Brew News, Homebrew Clubs, Winners Circle

**Art Director** *Steve Harley*  
**Advertising Manager** *Linda Starck*  
**Vice President of Operations** *Liz Weimer*  
**AHA and BJCP Administrator** *Karen Barela*  
**Graphics/Production Director** *Tim Sposato*  
**Junior Graphic Designers** *Peggy Stiefel, Jenny Wolcott*  
**Circulation Department** *Paul Echternacht, Director*  
*DeDe Schum, Assistant*

**Marketing Consultant** *Daniel Bradford*  
**Assistant Office Manager** *Philippa Hollands*  
**Customer Service Representative** *Eric Gold*  
**Sales Manager** *Buzz Burrell*  
**Shipping Clerk** *T.E. Bennett*  
**Accounting Supervisor** *Teresa Brackett*  
**Co-Directors, National Beer** *Jim Homer, AHA*  
**Judge Certification Program** *Pat Baker, HWBTA*  
**Association of Brewers** *Michael Weston—Chairman*  
**Board of Directors** *Charles Kirkpatrick—Vice Chairman*  
*Harris Faberman—Secretary*  
*Stuart Kingsbery, Charles Matzen,*  
*Charlie Papazian, Loran Richardson*  
**Corporate Officers** *Charlie Papazian—President, Treasurer*  
*Harris Faberman—Secretary*

## AHA Board of Advisers

*Judy Ashworth—Dublin, California*  
*Scott Birdwell—Houston, Texas*  
*Ed Busch—Somerville, New Jersey*  
*Steve Casselman—Reseda, California*  
*Andy Cebula—Arlington, Virginia*  
*Fred Eckhardt—Portland, Oregon*  
*George Fix—Arlington, Texas*  
*Jeff Frane—Portland, Oregon*  
*Don Hoag—Saginaw, Minnesota*  
*Michael Jackson—London, England*  
*Bill Murphy—Brookline, Massachusetts*  
*Charlie Olchowski—Greenfield, Massachusetts*  
*John Sterling—St. Louis, Missouri*

The Association of Brewers Inc. is a Colorado non-profit corporation for literary and educational purposes to benefit homebrewers of beer and all those interested in the art of homebrewing. The Association of Brewers is exempt from Federal Income Tax under Section 501(c)(3) of the Internal Revenue Code. All gifts, grants and contributions are tax-deductible.

The American Homebrewers Association is a subsidiary of The Association of Brewers. Membership is open to everyone. *zymurgy* is the journal of the American Homebrewers Association and is published five times a year. Subscription and U.S. memberships are US\$25 per year. Foreign: US\$30 per year. Changing your address? Let us know in writing, please.

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

ISSN 0196-5921

Printing by EBSCO Media, Birmingham, Alabama. The opinions and views expressed in articles are not necessarily those of the American Homebrewers Association and its magazine, *zymurgy*.

## 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.

## GLASS CARBOY BREWERY IN A BOX BOTTLEGAS BURNERS

### BARRIER-BAGGED HOP PELLETS

#### 1990 Hop Crop Alpha Acids\*

Cascade	4.9	Nugget	12.1
N. Brewer	6.9	Willamette	4.0
Cluster	6.8	B.C. Kent	4.1
Centennial	9.1	Tettnanger	3.4
CFJ4	8.5	Mt. Hood	3.7
Chinook	10.8	Saaz	3.5
Eroica	10.0	1000 Faces	6.8

### FOIL PACKED EUROPEAN WHOLE HOP PLUGS

Hallertauer Hersbrucker	3.0
Fuggles	4.6
Styrian Goldings	5.4
Saaz	2.9
Kent Goldings	5.0
Northern Brewer	7.0

\*Alpha Acids of present stock. We print the exact Alpha Acid on each bag.

## LIQUID YEASTS

Only from WYEAST, unique varieties in laboratory clean packets.

2007 St. Louis	1007 German Ale
2035 New Ulm	1028 London Ale
2042 Danish	1056 Chico Ale
2206 Bavarian	1084 Irish Ale
2308 Munich	1338 Altbier
2124 Bohemian	3056 Wheatbeer

## GREAT FERMENTATIONS of Marin

Home of

THE BARGAIN BOX OF BREWING!

Call, or write us for our

**FREE CATALOG!**

87 Z Larkspur  
 San Rafael, CA 94901  
 (415) 459-2520

TOLL FREE ORDER LINE

**1-800-542-2520**

# EDITORIAL

CHARLIE PAPAZIAN

## Unveiling Homebrew

**I**f the notion of enjoying beer is an indication that one also may enjoy making it, I am deeply perplexed. In my travels throughout the world I never fail to notice that beer is enjoyed to a great degree by most cultures. Beer is indeed a universally enjoyed alcoholic beverage. This enjoyment becomes even more intense among homebrewers and beer enthusiasts who take the time and effort to appreciate and respect beer as an alcoholic beverage.

Homebrewers come from many walks of life and embrace a variety of lifestyles. Homebrewing, beer enjoyment and the people who brew and appreciate beer are what I enjoy about the hobby. It is what helps give the current popularity of homebrewing vitality.

Where will homebrewing go? What can it grow to be? Is it a fad? Why the sudden spurt of popularity? Over the years, answers to these questions have come quite naturally from survey data and from observing the industry in the markets it was already reaching. But now after a phone interview I wonder about those freshly answered questions and consider my feelings about the much more vast potential that the hobby seems to have neglected inadvertently.

Our surveys, my homebrew-related travels, conference attendance, club participation—they all clearly portray who the homebrewers in America are: 97 percent male, 98 percent white (and a disproportionate number with facial hair, but that is another editorial for another time). I suppose during the last 20 years of my homebrewing endeavors I must have unconsciously realized that homebrewing and its appreciation were primarily limited to this segment of our culture. But I have become more conscious of it recently and wonder what it could mean for the homebrewing hobby.

Don't women, blacks, Hispanics, Asians or other Americans of foreign origin like beer? Here is what perplexes me. I know very well that they do, but inadvertently our hobby seems to have evolved in such a way that we've somehow left them behind. It's as though, while on the run, we could pause a moment for a beer, look back, realize we left some important people behind, whistle, wave our arms to beckon, "Hey, c'mon and catch up, let's


go, sorry we left you behind." Why shouldn't they become beer enthusiasts and express an appreciation for beer and homebrewing just as we, the current "group" of American homebrewers do.

I wonder why homebrew demographics have evolved to what they are today. I've never sensed any intentional direction of marketing or group invitation to inhibit diversity. Perhaps the relatively new popularity of homebrewing and the cultural diversity of America have changed so rapidly that we have neglected to pause and consider what kind of hobby we have become and what potentials we may be overlooking.

Homebrewing in America has enjoyed a well-founded, educated and steady growth—a type of growth that will help assure strong enthusiasm for homebrewing and a respect for beer as an alcoholic beverage. If we are to maintain enthusiasm for homebrewing and an educational, respectful environment for beer and brewing appreciation, it may be time for individuals, organizations and companies to invest in reevaluating where we can go from here.

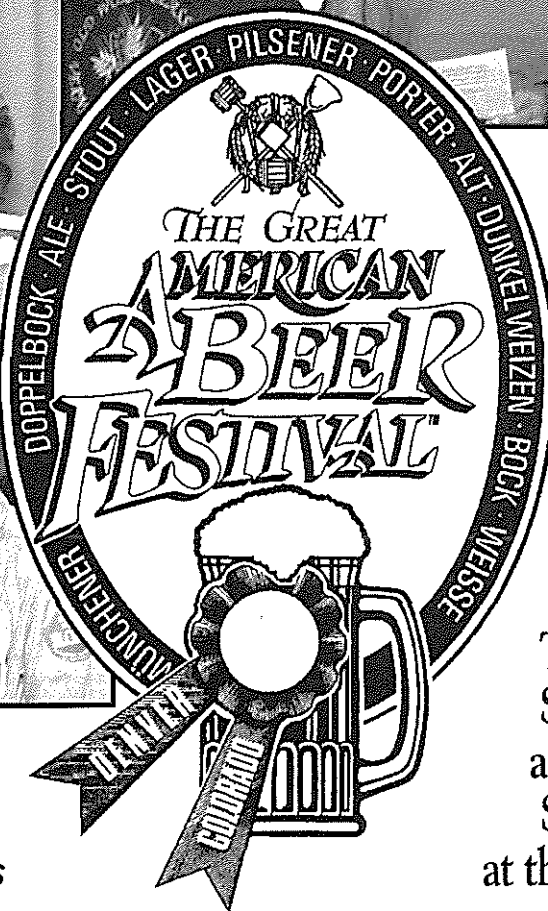
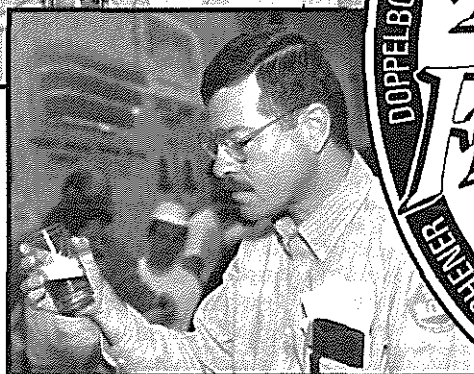
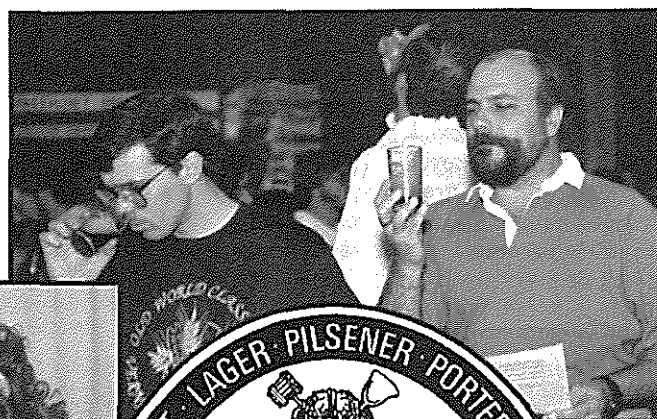
Where does the responsibility lie? Is there a responsibility? I believe there is, and it lies with those who wish to see the hobby grow and assure itself of a respected place in the quality of life that the future holds for all of American society. Perhaps we could examine how we conduct our gatherings, marketing and advertising—in image, deed and behavior. An examination that would not compromise enjoyment, but focus on expanding it.

On a sunny, warm summer day, with a cool homebrewed German Pils or a satisfying mug of special bitter in hand, I cannot help but believe that there are many more people who would enjoy the qualities that homebrewing gives to one's soul.

Changes do not occur overnight. For those individuals, organizations and companies that invest in bringing the enjoyment of homebrewing to Americans, I would encourage them to be patient and persevere. Big changes begin with small efforts. Beer and homebrewing and the enjoyment they contribute to the quality of life are contagious, and will naturally grow with some careful nurturing in the beginning. The rest will take care of itself. The joy of homebrewing is, simply, just that way. 

# CELEBRATE A DECADE OF THE BIGGEST BEER FESTIVAL IN AMERICA

October 4 & 5  
Denver Merchandise Mart  
Denver, Colorado



Over  
500 beers  
More than 150 breweries  
At least 28 different styles  
And 7,500 plus beer lovers

Tickets  
\$13.00  
advance  
\$16.00  
at the door

Call 1-800 524-7169 for GABF plane fares,  
1-800 842-4415 or 1-800 465-4329 for GABF hotel reservations,  
1-303 447-0816 for advance ticket sales



# DEAR ZYMURGY

## OUR READERS

### A Relative-approved Recipe

Dear *zymurgy*,

I have been brewing beer off and on for about six years. I started with kits and the usual recipe of mixing one can plus corn sugar and hot water. While the beer turned out to be somewhat acidic (more like Champagne), I persisted. Next I followed the alternative of omitting the corn sugar and using an extra can of extract—a definite improvement, although the beer did not always ferment well.

Then, after subscribing to *zymurgy* (which I saw at the store where I buy the malt) I learned about boiling the malt extract with the hops. My life has never been the same since. The beer is clearer, more “drinkable” and, more important, it turns out consistently good without the fermentation problems I sometimes had with the earlier recipe. “Malty” and “quenching” are words that come to mind as I sip the brew (which I am now).

I also enjoy sharing the beer with my wife, Julie, who until recently used to enjoy wine with dinner. Even my relatives once admitted that the beer was OK. If you knew my relatives you’d realize the significance of this statement. Anyway, I’d like to say thanks for the help and keep up the good work. I can’t wait to try the “Pilsener ale,” (*zymurgy* Summer

1990 Vol. 13, No. 2), the one with honey.

Let me close by sharing some brewing tips with you:

(1) If you are going to brew after sundown, leave a night light on next to the fermenter so the budding yeast cells don’t bump into one another.

(2) The practice of “stagger brewing” should be carried out with great care especially when carting around a pot full of boiling wort.

Moe Bushra  
Toronto, Ontario

### A Pitch for Homebrew

Dear *zymurgy*,

Brewing is incredible. It’s a science, a craft, an art, a tradition. So many different facets.

I’ve gained a great deal of ex-

tremely practical knowledge from reading and studying the technical aspects of brewing (and my beers have really improved!).

But there’s the other side. What should I call it—the spiritual side, the emotional side, the right-brain side of brewing. It’s the side that makes me genuinely love to brew.

It’s the side that embraces the art and tradition of brewing that has been practiced for millennia. The side that goes off on flights of imagination to Sumeria 2000 B.C., to 16th century Germany. The side of myself that gets hypnotized staring into the world of a fermenting wort.

When I brew I forget about my problems, about job stress—it just all disappears. I’m completely focused on “creating” something. And after I’ve pitched the yeast and I’m contemplating what I’ve made, I feel completely renewed.

Sally Ilger  
Santa Monica, California

### The First Cold Duck?

Dear *zymurgy*,

I’m fairly new with this creative craft of homebrewing beer. I’ve only been doing it for a little over two years now. About 14 years ago I was introduced to homebrewed beer while living in the Midwest. Homebrewed beer was served in a few of the pubs I went to. It was an interesting experience because those homebrewed beers were flavorful compared to the com-

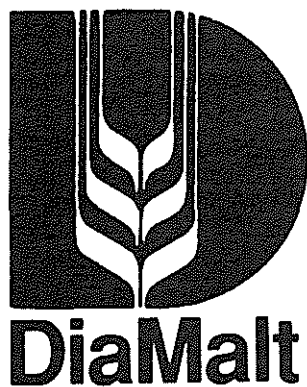


**At press time in Boulder (May 1) there's snow on the ground, so here's a label, by Jim Herrold of Laramie, Wyo.**

# Premier Malt Products, Inc.

The premier malt  
for over 50 years.

- custom blending
- private labeling
- now available in 3.3 lb. cans



For more information  
contact:

Susan Graydon  
Premier Malt Products  
P.O. Box 36359  
Grosse Pointe, MI 48236

Call Toll Free:  
1-800-521-1057  
In Michigan:  
313-822-2200

mon store-bought beers I'd experienced in previous years. One guy I dated that year really intrigued my interest to learn more about brewing when he took me to his parents' wine and duck farm for a day and introduced me to many of their homemade wines and beers.

Unfortunately I didn't stay in the Midwest long enough to get any information about this craft from others pursuing it. Moving back to the East I lost all contact with anyone who knew anything about homebrewing beer. Luckily, I never lost my interest or desire to someday find the opportunity to learn more and start pursuing the hobby, and one day I did.

A new book I got for its chapter on woodworking had a chapter on winemaking. Wine itself is no great desire of mine, but the chapter reminded me of the wines I experienced on the duck farm in the Midwest. I thought I'd have better opportunity to find information about homebrewing beer if I expanded my studies of winemaking. Sweetly enough, about a week after starting my first fermentation with wine I began brewing beer.

It was a pleasurable experience when my husband and I first made beer. It has become a shared craft and we enjoy it a lot.

I truly believe homebrewing beer is a creative, even artistic craft. Though I've only been doing it for a couple of years, it's an interest I'll pursue for many more. Along with making wines and meads, I am interested in taking homebrewing from my craft list someday and making it my career.

Laura Coleman  
Bethel, Connecticut

## Chemically Complex Water

Dear *zymurgy*,

Well, as you seem to have found out, I'm not living in Philadelphia anymore, which means no more of that mysterious tap water we call Schuylkill Punch, a secret brewing ingredient that made Ortleib's famous (or go out of business, depending how you look at it). I've moved deep into the heart of central New Jersey, a land of rolling farms and rife with Superfund sites. I've read that the best beers start with

chemically complex water, so let's keep our fingers crossed.

Even with the world going to hell in a plastic fermenter bucket, there are some things that remain fun. Remember fun? Cleaning out the fridge of all the old brewing stuff and whipping up a batch of the best damned beer you've ever made, even if it's principal ingredients are horseradish and wilted dill leaves. Thanks for another informative and, above all, fun year of brewing. Please sign me on for another year of both *zymurgy* and *The New Brewer*. Relax, don't worry, let's get the hell out of the gulf and have a homebrew waiting for all our folks over there.

No beer for oil,  
Dan Z. Johnson  
Hightstown, New Jersey

P.S. Isn't there a way of getting a "beer option" on the IRS 1040 form? "Check here to send your money toward better homebrew instead of blowing it on some pointless war in the desert." Look into it!

## Santa's Helpers

Dear *zymurgy*,

My wife and I, homebrewers for seven months, find *zymurgy* an incredible resource. By reading the articles and following the recipes we've quickly become better brewers! And we worry less about our beer, too.

Our favorite homebrew label was one we made for a going-away party for our friend Frank Richter. Because he was going away to Germany we





made an appropriate label. Our apologies to the St. Pauli Girl!

We had fun with our Christmas brew label this year. I'm sure Santa appreciates a good spiced brew at Christmastime, just like the rest of us hearty souls!

Brewing happily together,  
David and Julie Weisberg  
Keene, New Hampshire

P.S. We've just helped start the first New Hampshire homebrew club and we can't wait for the annual conference in Manchester. We are located only one hour away and are willing to help out any way we can!

### More on High-gravity Fermentation

Dear *zymurgy*,

In regard to Don Hoag's problems with stuck high-gravity fermentations, "New Tales of Old Ales" (*zymurgy* Winter 1990, Vol. 13, No. 5) I recently came across an article in the *Journal of the American Society of Brewing Chemists* (Vol. 48: No.1, pp. 26-32) that I believe would answer some of Don's questions. For those unable to obtain a copy I will attempt to summarize the highlights.

"Yeasts require small quantities of oxygen to synthesize unsaturated fatty acids and sterols for growth and cell division; therefore attenuation is related to oxygen availability. The effects of limited oxygen supply are compounded in high or very high-gravity wort fermentations." The article defines very high gravity as greater than 18° Plato (1.076).

The article points out that brewer's yeasts have a wide range of oxygen requirements. Lager yeast was used in the study with an attempt to adapt the yeast to high-gravity worts before pitching. According to the article, lager yeasts are more tolerant of alcohol than previously believed. Worts exceeding 28° Plato have been fermented when yeast requirements are taken into consideration! Ale yeasts are not specifically mentioned, but because many commercial breweries are using them for their barley wines this probably is true for them as well.

The study found that although any oxygen present at pitching re-

sulted in a faster fermentation, the amount of oxygen was not as critical as the timing of supply. The most efficient for the subject yeast was 10 to 14 hours, post-pitching. They also found that low levels of oxygen at 12 hours, post-pitching was more effective than air saturation prior to pitching.

Several methods of oxygen addition are outlined: (1) Sterile air/oxygen injection causes foaming and is difficult for the average homebrewer but not impossible (see *zymurgy* Winter 1990, Vol. 13, No. 5: "Reviews"). (2) Concentrated oxygen in water addition largely eliminates foaming but is out of the scope of most homebrewers. (3) Rousing vigorously before carbon dioxide production starts replaces oxygen already consumed. (4) Add a second brew 12 hours after the first one is pitched.

The final two strategies are easily pursued by the homebrewer. I would also suggest two further strategies: (1) Aerate the wort as much as possible before pitching and (2) pitch maximum recommended amount of vigorously fermenting yeast (up to one fluid ounce per gallon). Perhaps the yeast manufacturers could be consulted about the oxygen requirements of each strain.

I recently brewed a doppelbock and a barley wine using some of these strategies. For the doppelbock I aerated the wort by shaking the carboy every hour or two until fermentation was evident (about seven hours). Original gravity was 1.082 and in three days had dropped to 1.022. Final gravity was 1.019. Yes, the mash temperature was too low but the yeast had no problem. The barley wine was brewed by reserving half the volume in a closed pot before adding flavoring hops. The temperature of the reserved wort was kept above 160 degrees F (71 degrees C) until 12 hours after the first half was pitched. The prior technique also was used. Original gravity was 1.102 and final gravity was 1.035. Whitbread lager yeast was used in both cases with a 1.5-liter starter. Both foamed far more than normal. I use a 28-liter carboy for a 20-liter batch to cope with this.

John Krueger  
Oshawa, Ontario  
Canada

## WORLD BEER REVIEW

### The Beer Connoisseur's Newsletter

We are looking for the perfect beer. Won't you join us?

And while we're looking we will tell you about new brands, classic brands, bad brands, new microbreweries and pub breweries, other beer publications, beer festivals and tastings, and other newsworthy events.

For free copy send to:  
WBR Publications  
Box 71  
Clemson, SC 29633

\$16.50 for annual subscription  
6 issues a year



BACCHUS & BARLEYCORN, LTD.  
everything for the amateur  
brewmaster and enologist;  
largest variety of beer and  
winemaking ingredients and  
supplies in the Midwest, a service  
oriented establishment, free  
consultative services, competitive  
prices, free catalogue.

FAST FAST MAIL ORDER SERVICE

**Bacchus & Barleycorn, Ltd.**  
8725Z Johnson Drive  
Merriam, KS 66202  
(913) 262-4243



# ASSOCIATION NEWS

## Brew Free or Die

The Thirteenth Annual AHA Conference is just around the corner, June 19 to 22. It's not too late to make your reservations, but remember that should a sudden urge find you in New Hampshire at the spur of the moment, we'll be happy to register you at the door. The speakers have been working for months preparing to dazzle you with brewing know-how and to share secret techniques learned through years of trial, error and research.

Clubs have been brewing gallons of beers for months now, anxiously awaiting the chance to exchange beers during club night with comrades from across the country. With all the activity, roundtable discussions, competition awards, homebrew expo, New England beer tasting, Boston beer day and meeting new and old friends, this is one conference you won't want to miss.

## National Competition hits all-time high

The 1991 Competition brought in 1,627 beers. With the first round completed, it's just a matter of time before we know who the 1991 homebrew royalty of the year will be. After a lot of preparations, the foundation has been laid and tested for having the first round in several locations across the country. None of this would have been possible without the

generous support of our volunteers at each site. Also, our sponsors in the homebrew business and breweries who generously donated trips and prizes are to be applauded for their support.

## 1991 Competition Sponsor List

Aass Brewery  
American Mead Association  
Anchor Brewing Co.  
Beer and Wine Hobby  
BME Extract  
California Concentrates  
The Cellar  
Chicago Brewing Co.  
Crosby & Baker  
DeFalco's Wine and House Beer  
Dewey's Ale House  
Duwamps Cafe/Seattle Brewing Co.  
East Coast Homebrew Supply  
Edme Ltd.  
Goose Island Brewing Co.  
Great American Beer Festival  
Great Fermentations of Marin  
Great Fermentations of Santa Rosa  
Havill's Mazer Mead  
The Home Brewery  
Home Wine and Beer Trade Association  
Jasper's Home Brew Supply  
Jim's Homebrew Supply  
Keller's Brewhaus  
Manneken Brussel Imports Inc.  
Marin Brewing Co.  
Maritime Pacific Brewing Co.  
Miller Brewing Co.  
The Mountain Brewers Inc.  
Munton and Fison

National Association of Wheat Growers Foundation  
Otter Creek Brewing Co.  
Pacific Coast Vintners  
Pavichevich Brewing Co.  
Pike Place Brewery  
Premier Malt Products  
The Purple Foot  
Roslyn Brewing Co.  
F. H. Steinbart Co.  
The Vermont Pub and Brewery  
Weinkeller Brewery  
Wine & Hop Shop  
Wines, Inc.  
Wynkoop Brewing Co.  
Yakima Valley Hop Growers  
Young & Co.

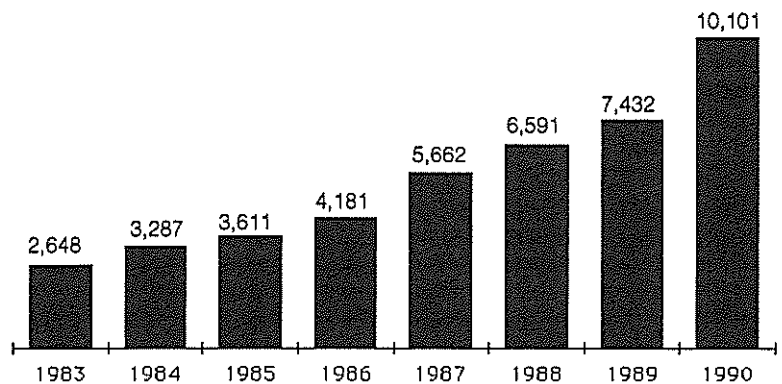
## Dollars and numbers promote the BJCP

The AHA has once again donated \$1,200 to the Beer Judge Certification Program. The money will be used to help offset administration costs in running the program. The BJCP is now in its sixth year, and with the program offering such a clear and usable service it's not surprising to see how rapidly the BJCP is growing.

Already for 1991, we offer 17 exams across the country (remember, there is a 60-day notice required for setting up any exam). We expect our total number of judges (376 Recognized, 117 Certified, 15 National and 8 Honorary Masters) to exceed 650 before the end of this year. Several judges will be moved up officially to national status during the BJCP awards luncheon at the conference.



### American Homebrewers Association Year-End Membership 1983-1990



To all the judges out there in homebrew land looking to move up, we say "go forth and judge"!

### Explosions occur in AHA

AHA membership grew a record 35 percent in 1990. At year end, we had 10,101 active members, more than 2,500 above the 1989 membership (see chart). For 1991, we anticipate continued growth, to which January, February and March numbers already have proven consistent. In order to accommodate the growth rate, we have undergone transitions within the staff and operations structure. The changes continue to evolve as we give attention to maintaining the quality of services and keeping in touch with our membership. As always, we welcome your comments and critiques and encourage you to contact the AHA with your views.

### SCP gains ground and judging manual

1990 has proved to be a zenith year for the Sanctioned Competition Program as we climbed to 72 competitions, a dramatic increase over the 49 competitions of 1989. So far, 1991 shows the growth rate continuing to rise with 19 competitions lined up for this year. The program has undergone a few minor revisions, mostly in the form of clarification of rules and improvements in the material we supply to the organizers.

### American Homebrewers Association A Division of the Association of Brewers Inc. 1990 Income and Expense Statement (unaudited)

Revenues		1990
Membership and sponsorship	\$225,000	51.4%
Advertising sales	\$57,900	13.2%
AHA-related merchandise sales	\$4,800	1.1%
<i>zymurgy</i> sales	\$47,300	10.8%
National Conference	\$67,100	15.3%
National Competition	\$14,600	3.3%
Beer Judge Certification Program	\$11,800	2.7%
AHA-Sanctioned Competition Program	\$1,700	0.4%
Misc. (postage, services, etc.)	\$7,800	1.8%
<b>Total</b>	<b>\$438,000</b>	<b>100.0%</b>
Expenses		1990
<i>zymurgy</i> magazine	\$134,900	31.8%
National Conference	\$50,200	11.8%
National Competition	\$14,200	3.3%
AHA-related merchandise	\$1,400	0.3%
Marketing and Public Relations	\$27,400	6.5%
Overhead (salaries, rent, taxes, utilities, insurance, etc.)	174,000	41.0%
Beer Judge Certification Program	\$9,000	2.1%
Sanctioned Competition Program	\$800	0.2%
Club-related Programs	\$4,200	1.0%
Misc. (travel, postage, telephone, etc.)	\$8,600	2.0%
<b>Total</b>	<b>\$424,700</b>	<b>100.0%</b>

Send a self-addressed stamped (52 cents) 9 x 12 inch envelope for a more complete financial statement of the Association of Brewers. If you have specific questions please state them and we will do our best to address your concerns.

A spinoff of the changes we've made for the National Competition will result in crossover changes for the SCP. We've developed a manual for judging procedures to be used for the National Competition and revised for the SCP. We plan to incorporate comments, suggestions and critiques from the participating judges into the revised manual. Also, because of the new format for the nationals it was necessary to eliminate first-round "bye" certificates as awards, but we are continuing to offer free entry

certificates.

The change was necessary for a number of reasons. Based on the 72 sanctioned competitions in 1990, there would have been 144 additional entries put directly into the second round. Imagine 30 additional pale ales coming in at the last minute for judging, with no way to plan ahead for them! Also, we feel the system of three first-round judging sites will ensure the quality of second-round entries. The bottom line is that with a competition this big, more control over

the funneling of entries is necessary to maintain a quality event.

### **Club-Only Competitions: Six is better than four**

With the overwhelming success of our four annual club-only competitions comes a need to include other beer styles. Upon recommendations from homebrew clubs and the Board of Advisers, we've decided to move to six competitions a year with two new styles rotating in each year. The standard India pale ale, Oktoberfest, bock and wheat beer competitions will remain the same. The new schedule will start in 1992 with Pilsener and barley wine as the new styles (see the Calendar of Events in "Brew News"). Note there are two subcategories under Pilsener, German and Bohemian. Remember, you have plenty of time (if you start soon) to begin brewing your barley wine for winter 1992.

### **CompuServe forum undergoes change**

The CompuServe beer forum underwent minor surgery in mid-February and all reports show the operation was successful and has improved its previous condition. With so many enthusiastic beer lovers/computer aficionados using the forum, things were starting to get crowded, making specific messages hard to find. Robin Garr, the forum's computer beer czar, has arranged new subtopics and library names to help ease the traffic.

The new topics are 13-Technical Homebrewing and 14-General Homebrewing. Library 13 has been changed to contain brew club and competition information. Users of the forum report the new topics have eased the traffic and messages are easy to find and follow. If you haven't yet joined the CompuServe network, a free start-up package that gives you \$15 of free connect time is available through your AHA membership. Simply call or write the AHA and ask for the CompuServe information packet. You too can be a computer keyboard away from on-line conversations with hundreds of fellow beer enthusiasts.

# **HOT FUN AND COLD BREW IN THE SUMMERTIME**

Summertime. The best time for a tall cold one. But the most difficult time of year to brew it.

As the nation's leading supplier of home beer and wine-making supplies, Alternative Beverage is committed to advancing the state of the hobby in every possible way. Our Brewmaster has prepared a list of beers that brew well in warmer weather . . . and comprehensive, easy-to-follow instructions for fool-proof Summer brewing.

Call or write today for our FREE 48 page home brewer's catalog. The one with the biggest selection and lowest prices in the industry. When you do, we'll also send you our complete instructions for successful Summer brewing . . . absolutely FREE. We'll show you which beers to brew, how to avoid common Summer brewing problems, and how to stick your beer where the sun don't shine.

Until you're ready to drink it, of course!

**CALL TOLL-FREE 1-800-365-BREW**

alternative  
BEVERAGE

114-0 Freeland Lane • Charlotte • NC • 28217



As far as we're concerned there's only one kind of YARD Party!!!



presents the perfect addition to any party. The **Yard of Ale**. This attractive 36 inch glass holds 55 oz. and comes with a red oak stand for displaying itself when not in use. It is also available in a Competition set for challenging your friends. *Just like in the movie Oxford Blues.*

When your party is more of a gathering a **Half Yard** or **Foot of Ale** is what your looking for.

	<b>Yard</b>	<b>1/2 Yard</b>	<b>Foot</b>
<i>Single Set</i>	\$69.95	\$49.95	\$29.95
<i>Competition Set</i>	\$110.00	\$79.95	\$49.95

Add \$5 shipping and handling. New York State Residents add sales tax.  
VISA/Master Card accepted.

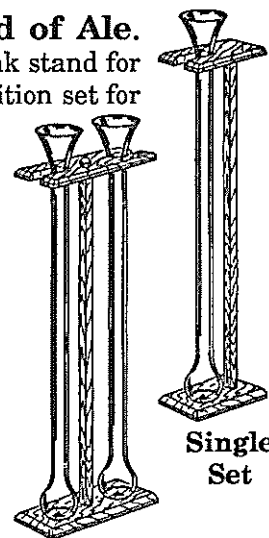
Keep your **YARD** well groomed with Nightwing accessories!!!

Keep your Set clean, whatever size you choose, with the **Ale Mop**. It's specially designed to get to the bottom of your dirtiest glass.

Top it all off with an **Ale Cap**. The red oak cap keeps dust out of your glass when not in use and is a perfect match to your set stand.

Send check or money order to:

**Nightwing Enterprises • P.O. Box 3280 • Binghamton, New York 13902-3280 • Phone: (607) 798-0297**



**Competition Set**

**Single Set**

*Write to us or call for more information.*

## National Homebrew Day stirs celebration

National Homebrew Day was celebrated here in Boulder in conjunction with the first round of the National Competition. Many judges converged at the Boulder Beer Co. for the final day of judging in two sessions on May 4. Then, with their beer minds intact they continued on to a Colossal Colorado Bar-Be-Que celebrating National Homebrew Day and the completion of first-round judging. Elsewhere across the country, media and press personnel were sipping, perhaps for the first time ever, the taste of homebrewed beer. As part of a media blitz plan, the AHA sent bottles of homebrew to selected media people in hopes of enticing nationwide press coverage of our beloved hobby. We'll keep you informed of the results.

### What's on your mind?

We are very anxious to receive responses from our members and readers to the survey found between pages 16 and 17. The last time we

surveyed our members was 1988, and we are very curious to see how you've changed since then. Our goal is twofold. One is to acquire demographics information to use for our media and advertising contacts. Two, and perhaps the most important aspect of the survey, is to find out how we are doing as a service-orientated association.

As our membership continues to grow, it becomes more and more important to understand what changes have occurred so we may adjust accordingly. We like to think of the survey as a review of the AHA by its members and a means of gaining an overview of the membership. We need to know what kind of service you expect from us, and then we'll do our best to accommodate your responses.

### Thinking Ahead

Even as arrangements for the 1991 conference are nearing completion, plans are under way for the 1992 conference. The tentative site is Milwaukee, Wis., home to the Miller

Brewing Co. and several microbreweries, including Sprecher Brewing Co., Lakefront Brewery and the Waterstreet Brewery. Karen Barela and Jeff Mendel (Institute for Brewing Studies) traveled to Milwaukee in late January, courtesy of the Greater Milwaukee Convention and Visitors Bureau Inc., who graciously gave them the grand tour of several hotel sites. Jeff is considering holding the 1992 Microbrewers Conference in April in Milwaukee, while Karen is looking at June dates for the Fourteenth Annual AHA Conference. This would be the first time in recent years that both conferences would be held in the same city.

### New Staff

Jenny Wolcott, a recent graduate in graphic design and photography from the University of Michigan, has joined the Association of Brewers staff in the production department as a junior graphic designer. Jenny moved to Boulder after hearing rumors of how nice it is here, and she is happy to report the rumors are true. We welcome her to our staff.

# BREW NEWS

DAN FINK

## Sugar in malt extract revisited

*Editor's Note:* We received a great deal of mail regarding a "Brew News" item about sugar in malt extract in the Winter 1990 *zymurgy*. Here is a representative letter and a response from the scientist who did the malt extract research.

Dear *zymurgy*:

The brief article on malt extract analysis in "Brew News," *zymurgy* Winter 1990 (Vol. 13, No. 5) raises more questions than it answers. The vast majority of homebrewers begin brewing with malt extract. Don't we deserve the highest quality ingredients for our beer? Aren't we paying top dollar for a specialty product? If I want to brew with corn syrup, I'll go down to the corner grocer and buy some.

Dr. Ingledew seems unwilling to share information on specific brands of adulterated malt extract. Perhaps *zymurgy*, as a service to its readers, could duplicate his research and publish the results. How about it?

Sincerely,  
Paul M. Ritterhoff  
Towson, Maryland

*The response from Professor Ingledew to zymurgy:*

With regard to your [the AHA's] fax of Jan. 18, I have the following comments:

(1) The details of the work on malt extracts as conducted at the University of Saskatchewan was scheduled to be published in February in the Journal of the American Society of Brewing Chemists except that—by our choice and without pressure from anyone—the names of the brands will not be printed.

(2) Dr. Low and I decided not to release the "Manufacturers" list because:

(a) we are uncertain in many cases whether or not the adulteration has taken place by the brewer or the packager of the extracts.

(b) it is legal to add adjunct(s) to wort although, at least in Canada, such additions would be declared on the label of the canned product.

(c) we have only tested 44 lager malt extracts. No ale extracts have been examined and many other lagers were not done. We committed more than \$200 per malt extract sample to do the work which is reported in the ASBC Journal, but we don't have the time or the money to do the many other

malt extracts which are available for analysis.

(d) we are not in the position to handle the expenses or time demands which would occur if such work resulted in legal action.

(e) we felt we were doing a service to the brewpub/homebrewing industry to report this work as we have done. It is up to your industry, the government and ultimate consumers to ensure that the product in the marketplace is as you would like it to be. We have identified a problem. Your pressure on the manufacturers or packagers will ensure that the situation is rectified.

(3) In spite of my comments above, I have complete confidence in the results obtained in my lab by my colleagues. There is no doubt that some manufacturers are profiting from the addition of lower cost corn sugars to malt extract.

Sincerely,  
W.M. Ingledew  
Professor, University of Saskatchewan

## Homebrew legalization comes closer in Georgia

Progress has been made in legalizing homebrewing in Georgia, one of

# CALENDAR OF EVENTS

1991

June 1	Second Annual Scotch Ale Competition, <b>AHA-Sanctioned Competition</b> , Modesto, Calif. Contact Wayne Baker at (209) 527-8808.	Sept. 5	Los Angeles County Fair Bees and Honey Mead Competition, <b>AHA-Sanctioned Competition</b> , Pomona, Calif. Contact Greg Stark at (818) 374-6371.
June 1	Renaissance Pleasure Fair Amateur Brewing Competition, <b>AHA-Sanctioned Competition</b> , San Bernardino, Calif. Contact Robert Busack at (714) 880-6211.	Sept. 14	Sonoma County Harvest Fair Homebrew Competition, <b>AHA Sanctioned Competition</b> , California residents only. Contact Paddy Giffen at (707) 795-8401.
June 18	Amateur Brewers of CNY 6th Annual Competition, <b>AHA Sanctioned Competition</b> , Syracuse, N.Y. Contact Kim Mills at (607) 255-3985.	Sept. 15-18	Master Brewers Association of the Americas 104th Annual Convention, Calgary, Alberta, Canada. Contact Dan Sommers at (608) 231-3446.
June 19	<b>BJCP Exam</b> , Center of New Hampshire Holiday Inn, Manchester, N.H. Contact the AHA at (303) 447-0816	Sept. 21	Harvest Homebrewers Competition, <b>AHA-Sanctioned Competition</b> , Renaissance Pleasure Faire, Novato, Calif. Contact Robert Busack at (415) 892-0937.
June 19-22	<b>AHA National Homebrew Conference</b> , Manchester, N.H. Contact the AHA at (303) 447-0816.	Sept. 21	<b>BJCP Exam</b> , Grants Pass, Ore., sponsored by Southern Oregon Brewers Society. Contact Hubert Smith at (503) 597-2142.
July 19-21	Oregon Brewers Festival, Portland, Ore. Contact Widmer Brewing Co. (503) 281-2437 or Bridgeport Brewing Co. (503) 241-7179.	Oct. 4-5	Great American Beer Festival X, Denver Merchandise Mart, Denver, Colo. Contact Daniel Bradford, Association of Brewers, PO Box 287, Boulder, CO 80306-0287; (303) 447-0816; FAX (303) 447-2825. Hotel accommodations available at The Inn at the Mart, 1-800-842-4415.
June 20	Alameda County Fair Homebrew Competition, <b>AHA-Sanctioned Competition</b> , Pleasanton, Calif. Contact Tom Dalldorf at 564 W. Sunset, Hayward, Calif. 94541.	Oct. 18	Taste of the Great Lakes, <b>AHA-Sanctioned Competition</b> , Frankenmuth, Mich. Contact Michael O'Brien at (313) 482-8565.
July 20	KQED 9th Annual International Beer and Food Festival, Concourse Exhibition Center, San Francisco, Calif. (415) 553-2200.	Nov. 8	Best of Fest, <b>AHA Club-Only Sanctioned Competition</b> , entry deadline is Nov. 8. Contact the AHA at (303) 447-0816.
July 27	The Second Annual Wines Inc. Christmas Homebrew Competition, <b>AHA Sanctioned Competition</b> , Columbus, Ohio. Contact Sean McGee at (614) 882-8718.	<b>1992</b>	
July 30	Washington County Regional Homebrew Competition, <b>HWBTA Sanctioned</b> , Hillsboro, Ore. Contact Frank Johnson at (503) 648-1416.	Feb. 3	Hail to Ale, <b>AHA Club-Only Sanctioned Competition</b> , entry deadline is Feb. 3. Contact the AHA at (303) 447-0816.
July 31	Alamo Cup, <b>HWBTA Sanctioned</b> , San Antonio, Texas. Contact Ron Confer at (512) 494-1002.	March 30	Bock is Best, <b>AHA Club-Only Sanctioned Competition</b> , entry deadline is March 30. Contact the AHA at (303) 447-0816.
Aug. 2	Weiss is Nice, <b>AHA Club-Only Sanctioned Competition</b> , entry deadline is Aug. 2. Contact the AHA at (303) 447-0816.	May 2	National Homebrew Day
Aug. 24	Fourth Annual Los Angeles County Fair Homebrew Beer Competition, <b>AHA-Sanctioned Competition</b> , Los Angeles County Fair Grounds, Pomona, Calif. Contact Bruce L. Brode at (213) 558-8458.	June 1	Penultimate Pilsener, <b>AHA Club-Only Sanctioned Competition</b> , entry deadline is June 1. Contact the AHA at (303) 447-0816.
Aug. 24	First Annual T.R.A.S.H. Bock and Mead Competition, <b>AHA-Sanctioned Competition</b> , Pittsburgh, Pa. Contact Greg Walz at (412) 331-5645.	Aug. 3	Weiss is Nice, <b>AHA Club-Only Sanctioned Competition</b> , entry deadline is Aug. 3. Contact the AHA at (303) 447-0816.
Sept. 4-7	National Microbrewers/Pubbrewers Conference and Trade Show, Buffalo, N.Y. Contact the Institute for Brewing Studies at (303) 447-0816.	Oct. 1	Best of Fest, <b>AHA Club-Only Sanctioned Competition</b> , entry deadline is Oct. 1. Call the AHA at (303) 447-0816.
		Dec. 1	Barley Wine is Fine, <b>AHA Club-Only Sanctioned Competition</b> , entry deadline is Dec. 1. Contact the AHA at (303) 447-0816.

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

the last bastions of homebrew Prohibition in America. According to Ken Dobson, M.D., of the Covert Hops Society in Atlanta, the bill (HB 62) introduced in the Georgia House of Representatives originally followed federal guidelines but was changed to allow only 25 gallons of annual beer production per household. The bill has been tabled until January 1992, but Dobson said the tabling motion actually was a positive move by the House.

According to lobbyists, there was a widespread misconception among legislators that such a bill was inappropriate in a session characterized by several bills that crack down on drunk driving. "If I thought for one minute that HB 62 would increase DUI, I would be fighting it tooth and nail, not lobbying for its passage," Dobson said.

For information on how you can help Georgians in their fight for legalization, see "Homebrew Clubs," page 62, under "Georgia."

### **New Jersey homebrew bill reintroduced**

A bill to legalize homebrewing in New Jersey (where it is prohibited outright) was reintroduced into the Legislature recently. The bill would allow 100 gallons of beer per year to be produced at home, though the Federal law allows 200. The bill was approved by the state Drug and Alcohol Abuse Policy Committee, which also voted to introduce it to the state Assembly. It passed the Assembly unanimously and is now before the state Senate. The chance of the bill passing is good, according to homebrew lobbyist and AHA Board of Advisers member Ed Busch of the Mid-Atlantic Sudsers and Hoppers (MASH) homebrew club.

### **Bile your wort**

Breweries in what used to be East Germany are struggling to compete with their more modern Western counterparts in the newly opened market. Some interesting revelations have come to light though. In a *New York Times* article, Jürgen Funk of the Sternburg Brauerei in Leipzig (which dates back to 1278) discussed

advice he received from Western brewers. "They convinced us that to be competitive, we had to brew under the German beer purity law," Funk said. "And they created marketing and advertising concepts for our products. Before unity we used to put cattle bile in our beer to give it the bitter flavor of hops, which we couldn't always get."

### **Hops can clean your liver**

Lupulones and humulones from hops may help the body dispose of toxins, according to Gilbert J. Mannering, professor emeritus of pharmacology at the University of Minnesota. The compounds stimulate the production of liver enzymes that metabolize harmful toxins.

Hops also contain hundreds of other components that may have similar effects, Mannering says, but no one yet knows which compounds survive the brewing process or how much beer would need to be drunk to benefit from the hops.

### **Electronic Sniffer**

An electronic nose developed by Bass and Neotronics can already identify three brands of lager by smell alone, according to *Electronics World & Wireless World* magazine. The prototype uses 12 sensors, each one coated to make it sensitive to a different organic vapor. Besides the obvious use in beer quality control, scientists believe the system could also be used to help blend coffee and perfume, or even to detect explosives or bacterial decay in food. The question is, could it pass the Beer Judge Certification Program exam?

### **Coors goes kosher**

America now has its first kosher beer, according to the *American Breweriana Journal*. The Union of Orthodox Jewish Congregations of America certified the Adolph Coors Co. after a three-month inspection of the plant and packaging systems.

"The claims of the company as to purity and the absence of additives we found to be true," said Rabbi Moshe Bernstein. Coors president Peter Coors stated that the brewery was

"honored" by the designation, which means Coors is allowed to carry the (U) symbol on its labels.

### **Havill's Mead heads for the U.S.**

Havill's Mazer Mead may soon be imported to the United States, according to meadmaker Leon Havill of Rangiora, New Zealand. Havill's mead is very popular in New Zealand and is starting to catch on in America. Havill presented a speech on meadmaking at the 1988 AHA National Conference in Denver, Colo.

### **Research profiles light beer drinkers**

According to a Mediamark Research Survey of the American Consumer printed in the *Beverage Alcohol Market Report*, those who prefer "light" beers are better educated, live in more affluent households and work more in white-collar jobs than regular beer drinkers.

---

### **AHA Sanctioned Competitions**

---

#### **Wort You Brewin'**

The "Wort You Brewin'" competition in Vancouver, B.C., on Feb. 2 drew 137 entries. Rob Lauriston of Vernon, B.C., won best of show with his Belgian witte and won round-trip airfare to judge the National Competition first round in Boulder.

#### **Hudson Valley Homebrew Competition**

The First Annual Hudson Valley Homebrew Competition in Kingston, N.Y., March 23 drew 126 entries. Wendell Choinsky's imperial stout took best of show.

#### **Fifth Annual Big and Huge Hearted Competition**

Robert Droust won the Big and Huge on April 6 this year with a "big ale." The competition, in Madison, Wis., received 142 entries.



Dear Homebrewers and Beer Lovers;

Welcome to the 1991 Homebrewers Survey!

Please complete the questionnaire on the reverse side, fold, tape and mail it back to us. Since we are a non-profit association, it is important to know the interests of our members—this is how we decide how to best serve you!

As an added thanks for your participation, we have enclosed a special order form for Brewers Publications most popular books, giving you **15% OFF** the already low member price. Even if you are not ordering or are not yet a member, please return this survey by July 1, 1991.

Our Sincere Thanks,

The Staff at the Association of Brewers

*Fold here*

PLACE  
STAMP  
HERE

## 1991 Membership Survey

American Homebrewers Association  
PO Box 287  
Boulder, Colorado 80306-0287

*Fold here and tape closed*

Quantity	Item	Special Member Price	Survey Discount Price	<b>SAVE 15%!</b>
_____	#431 Pale Ale	\$9.95	\$8.45	Name _____
_____	#434 Continental Pilsener	\$9.95	\$8.45	Address/Street _____
_____	#437 Lambic	\$9.95	\$8.45	City _____ State/Province _____
_____	#417 Brewing Lager Beer	\$12.95	\$10.99	Zip/Postal _____ Country _____
_____	#418 Brewing Mead	\$9.95	\$8.45	Amount ordered: \$ _____ + P & H: \$ _____ (Postage & Handling \$3.00 1st book + \$1.00 each additional book.)
_____	#414 Dictionary of Beer and Brewing	\$15.95	\$13.56	Total: \$ _____
_____	#415 Principles of Brewing Science	\$24.95	\$21.21	<b>Payment Method:</b> <input type="checkbox"/> Check enclosed <input type="checkbox"/> VISA <input type="checkbox"/> MasterCard
_____	#407 Winners Circle	\$9.95	\$8.45	Signature _____
				Card # _____ Exp. _____

**Prices good through July 1, 1991 only; This order form must be used!**

# 1991 Membership Survey

Enclose a separate sheet for further comments if you like. All answers are confidential. Results will be published in the Winter 1991 *zymurgy*.

1. In the last six months I have contacted the AOB by phone, letter or for an order (circle one only):
- 0      1-2      3-4      5-6      7-8      9-10      10+

2. The quality of AOB's service is (circle only one):

	Poor						Excellent	
Timeliness	1	2	3	4	5	6	7	
Courtesy	1	2	3	4	5	6	7	
Accuracy	1	2	3	4	5	6	7	

3. In the last 12 months I have participated in (circle all that apply):
- a. Judge Certification Program      b. Sanctioned Competition Program
- c. National Homebrew Competition      d. National Homebrew Conference
- e. Contributing writer      f. Compuserve
- g. Other \_\_\_\_\_

4. I do not participate in the Judge Certification Program because (circle one only):
- a. Unfamiliar with program      b. Few local competitions
- c. Can't get to an exam      d. Not interested
- e. Other \_\_\_\_\_

5. I have organized a competition but did not sanction it through the Sanctioned Competition Program because (circle all that apply):
- a. Unaware of program      not a concern      an important concern      1      2      3      4      5      6      7
- b. Too expensive      1      2      3      4      5      6      7
- c. Not interested      1      2      3      4      5      6      7
- d. Doesn't suit my needs      1      2      3      4      5      6      7
- e. Other \_\_\_\_\_

6. I would be more inclined to attend the National Homebrew Conference if the following were included (circle appropriate):

	not important				very important			
a. Family activities	1	2	3	4	5	6	7	
b. Resort setting	1	2	3	4	5	6	7	
c. Closer to breweries	1	2	3	4	5	6	7	
d. Another location	1	2	3	4	5	6	7	

for example: \_\_\_\_\_

e. Other \_\_\_\_\_

7. I own \_\_\_\_\_ Brewers Publications books (circle appropriate number):
- 0      1      2-3      4-5      6-7      8-9      10+

8. I purchased my last Brewers Publications book in \_\_\_\_\_, 19\_\_\_\_.
- (fill in month and year).

9. My critique of Brewers Publications books is based on the following (circle appropriate):

	poor				excellent			
a. Quality of the writing	1	2	3	4	5	6	7	
b. Technical information	1	2	3	4	5	6	7	
c. Usefulness of the material	1	2	3	4	5	6	7	
d. Depth/breadth of information	1	2	3	4	5	6	7	

10. My favorite Brewers Publications book is \_\_\_\_\_

My least favorite is \_\_\_\_\_

11. I would like to see Brewers Publications publish a book(s) on (fill in subject matter): \_\_\_\_\_

12. I purchased my Brewers Publications books after seeing them in (circle the most common sources):

- a. AOB mailing      b. AOB Catalog      c. Retail store
- d. *zymurgy* ad      e. Other catalog      f. Friend
- g. Other \_\_\_\_\_

13. I purchased my AOB merchandise (books, t-shirts, etc.) through (circle all that apply):

- a. AOB mail order      b. Other mail order      c. Retail stores
- d. Other \_\_\_\_\_

14. In the last 12 months I have purchased from the AOB \_\_\_\_\_ in AOB merchandise (circle only one):

- a. Nothing      b. \$1 to \$19      c. \$20 to \$49
- d. \$50 to \$99      e. \$100 plus

15. In the last 12 months I have purchased from sources other than the AOB \_\_\_\_\_ in merchandise (brewing books, t-shirts, etc.) (circle only one):

- a. Nothing      b. \$1 to \$19      c. \$20 to \$49
- d. \$50 to \$99      e. \$100 plus

16. I would like to see the AOB carry more of the following items (circle appropriate):

	not interested				very interested			
a. Books	1	2	3	4	5	6	7	
b. Clothes	1	2	3	4	5	6	7	
c. Glassware	1	2	3	4	5	6	7	
d. Misc. Items	1	2	3	4	5	6	7	
e. Other								

17. Age \_\_\_\_\_

18. Occupation \_\_\_\_\_

19. Approximate household income for 1990 \$ \_\_\_\_\_

20. Level of education (circle one only):

- a. Some high school      b. Completed high school
- c. Technical school      d. Some college
- e. Completed college      f. Graduate school

21. Do you own a computer or use one at work?      Yes      No

22. Have you brewed beer from a kit in the last year?      Yes      No

23. Number of years homebrewing \_\_\_\_\_

24. Number of gallons brewed a month \_\_\_\_\_

25. Amount spent a year on homebrewing \$ \_\_\_\_\_

**Thank you for your participation!**

## Micro and Pabbreweries

(Information furnished by the Institute for Brewing Studies)

### Openings

#### United States

**Colorado:** The Idle Spur Crested Butte Brewery and Restaurant, Crested Butte • The Hubcap Brewery and Kitchen, Vail

**Florida:** Sarasota Brewing Co. (#2), Bradenton • Kidder's Brewery and Eatery, Fort Myers • The River Walk, Ft. Lauderdale • Hops Grill and Bar (#2), Tampa

**Idaho:** Table Rock Brewpub and Grill, Boise

**Illinois:** Berghoff Brewery and Restaurant, Chicago

**Nebraska:** Lazlo's Brewery and Grill, Lincoln

**New York:** Zip City Brewing Co., New York

**New Hampshire:** Portsmouth Brewery, Portsmouth

**Ohio:** Meander Brewing Co., Youngstown

**Oregon:** Edgefield Manor, Troutdale

**Utah:** Eddie McStiff's, Moab

**Virginia:** The Blue Muse, Roanoke

**Vermont:** Dewey's Ale House, Brattleboro • Latchis Grille and Windham Brewery, Brattleboro

#### Canada

**Ontario:** Connors Brewing Co., St. Catharines

### Closings

#### United States

**California:** Firestone Brewing Co., Los Olivos

**Hawaii:** Pacific Brewing Co., Wailuku, Maui

**Minnesota:** Taps Waterfront Brewpub, Minneapolis

**New York:** Hungry Charlie's/ Clement's, Syracuse, (restaurant open but no longer brewing)

**Ohio:** Growlers Grill and Brewery (#2), Columbus

#### Canada

**Ontario:** Great Lakes Brewing Co., Brampton • Suds International, Burlington • Kirkland Lake Bavarian Inn/Bernie's Brewpub, Kirkland Lake • Bacchantes, Newmarket • Renegade Brewery, Thunder Bay

**NEW!**



The World's First *Mini-MicroBrewery!*

**BREWMEISTER™**

mini-microbrewery system

It's completely portable! Saves time and money!

•Totally modular system brews 5-20 gals perfect beer every time • Brews several varieties at once • Ideal for

microbrewers, homebrewers, brewclubs, restaurants, sporting clubs, etc. • Quick disconnects • Stainless jacketed tanks • Automatic temperature controls • CIP system • Shipped

fully assembled and ready to use • Includes complete instructions, recipes, and brewing supplies • Full warranty • Made with skill and pride in U.S.A.

**BREWMEISTER**

Dept. 142D

Box 46, RR 3

Bennington, VT 05201

FOR FREE LITERATURE PLEASE WRITE:

## HOMEBREWING 101

The American Homebrewers Association  
presents

### The National Homebrew Conference & Competition

June 19-22, 1991, Manchester, New Hampshire



Attend a four day seminar on your favorite topic: beer. Sit together with fellow beer students. Meet and talk with noted authors and beer experts. Exchange notes, recipes and beers. Spend days immersed in a homebrew education. Class work at its best:

### The National Homebrew Conference & Competition

For more information about the Conference and how you can participate, write or call the American Homebrewers Association, PO Box 287, Boulder, CO 80306-0287, (303) 447-0816, FAX (303) 447-2825.

# THE AMERICAN HOMEBREWERS ASSOCIATION

## SPONSORS

### COSMIC MUG

Ed Kendall — Niagara Vine Products, St. Catharines, Ontario  
Sandra Morgan — Wine And Brew By You Inc., South Miami, Fla.

### DIAMOND-STUDDED PLATINUM MUG

Stephen Argilan Jr. — Plattsburgh, N.Y.  
Cam Blattler — Brown Deer, Wis.  
David Bly — San Lorenzo, Calif.  
Robert Chasen — South Weymouth, Mass.  
Rick Deering — Gurnee, Ill.  
Steven Evers — Boulder Creek, Calif.  
Philip W. Fleming — Broomfield, Colo.  
Robert Fransen — Irving, Texas  
Michael Frost — Roseville, Calif.  
David Funk — Woodland, Calif.  
Michael Glean — Hudson, N.H.  
Chuck Golueke — Lone Apple Brewery, Green Bay, Wis.  
Roger Haggitt — Endicott, N.Y.  
John Head — Sacramento, Calif.  
Burt Hesse — Apple Valley, Calif.  
Art Jeyes — Crownsville, Md.  
Charles Kasicki — Pasadena, Calif.  
Karl King — Euless, Texas  
Ron Konecke, M.D. — Bear Creek, Pa.  
Alan G. Kornatowski — South Lyon, Mich.  
Ralph Lew — Aberdeen, Wash.  
Rich Link — Santee, Calif.  
Joseph Loiacono Jr. — New York, N.Y.  
Jim Majusiak — Iowa City, Iowa  
Jim Mangin — Milwaukee, Ore.  
Tim Norris — Chicago, Ill.  
Donald Pettimermet — Silver Spring, Md.  
Richard Ross — Woburn, Mass.  
Jon Rosse — Westbury, N.Y.  
John Sievers — Towson, Md.  
Michael Stevens — Grand Ridge, Ill.  
Tan Thanh Le — St. Johns Park, New South Wales, Australia  
Richard Trough — Sulphur, La.  
Chip Upsal — Mount View, Mo.  
Warren Weatherbee — Beer Makers' Supply, Lancaster, Mass.  
Robert J. Weber Jr. — Gales Ferry, Conn.  
Ed Westemeier — Cincinnati, Ohio  
Paul White — Orfordville Home Brew Supplies, Orford, N.H.  
Brian Zimmerman — Denver, Colo.

### GOLD

Jim Alexander — Alex Esso Mart, Penobscus, New Brunswick, Canada  
Joel Bauman — Belmont, Mass.  
Michael Cain — Seattle, Wash.  
John Heer — Fort Collins, Colo.  
Jonathan Lillian — Upper Montclair, N.J.  
John McKee — Santa Maria, Calif.  
Charles McMurdo — Kailua, Hawaii  
Dave Ulrey — Lawrence, Kan.  
Dane Wells — The Queen Victoria Inn, Cape May, N.J.

### PEWTER

Great Northern Brewers — Anchorage, Alaska  
Donald Adams — Verdi, Nev.  
Gary Aumiller — East Northport, N.Y.  
Paul Beattie — Gautier, Miss.  
Monte D. Bejeault — Bremerton, Wash.  
John Brock — Seattle, Wash.  
Peter Burman — Hixson, Tenn.  
Chris Caffey — High Point, N.C.  
Andrew Cebula — Arlington, Va.  
John Cocco — Lafayette Engineering Inc., Lafayette Hill, Pa.  
John N. Collins — Mt. Tremper, N.Y.  
Ray Daniels — Chicago, Ill.  
Ed Davanzo — Santa Monica, Calif.  
Doug Diggle — Old Town Liquors, Carbondale, Ill.  
Steve Hamburg — Chicago, Ill.  
Anthony Heynack — Iron Mountain, Mich.  
Frederick Heywood — Boise, Idaho  
Greg Horton — East Coast Homebrew Supply, Mapleville, R.I.  
Sally Ilger — Laguna Beach, Calif.  
Dean Leto — Country Food & Liquor, Mokena, Ill.  
Dave Lyng — Phoenixville, Pa.

Joseph J. Menkevich — Philadelphia, Pa.  
Tony Morrison — Headland, Ala.  
Michael O'Brien — Ypsilanti, Mich.  
A.P. Ward Pond — Los Angeles, Calif.  
John H. Roberts — Johnny Beer, Hickory, Miss.  
Mike Rodgers-Willson — Victoria, Australia  
Daniel Rolka — Saginaw, Mich.  
F. Blaise Roncagli — Cleveland, Ohio  
Gregg Smith — Tarrytown, N.Y.  
Stephen Snyder — Olney, Md.  
Stuart Sutton — Fayetteville, N.Y.  
John Thomas — Temecula, Calif.  
Richard Whitmer — Burton, S.C.  
Gene Woodring — Auburn, Ind.

### PAPER

Chris Ahlberg — Greenwich, Conn.  
Curt Ames — Monterey, Calif.  
Tanner Andrews — DeLand, Fla.  
Richard Andrews — Spices Unlimited, Texarkana, Texas  
J. Sylvester Arena — Phoenix, Ariz.  
Nick Backlund — Jersey City, N.J.  
Joe Barrett — Charlotte, N.C.  
Gary Baum — O'Baum's Brewery, Woodland Hills, Calif.  
Don Bower — DLB Vineyards Inc., Westlake, Ohio  
Thomas B. Brayer — Newton Center, Mass.  
Charles Brekke — Oklahoma City, Okla.  
E.J. Brewhaus — Folcroft, Pa.  
Michael Bryant — Minneapolis, Minn.  
Steve Bussiere — Newport, Minn.  
Harold Buttermore II — Ann Arbor, Mich.  
Kevin Carroll — West Palm Beach, Fla.  
Kerry Clinkenbeard — Wichita, Kan.  
Paul Coffelt — Pasadena, Md.  
Pat Collins — Dallas, Texas  
Daniel J. Conlin — Phoenix, Ariz.  
Michael Crodry — Colorado Springs, Colo.  
Thomas Crosby — Ipswich, Mass.  
Kenneth Cummings — Asheville, N.C.  
Barry Cunningham — Chillicothe, Ohio  
Robert Deane — Biddeford, Maine  
Dennis M. Doherty — Mystic, Conn.  
John Dopazo — Buena Park, Calif.  
Arthur E. Douglas — Haddonfield, N.J.  
Don Duffie — London, Ontario, Canada  
Roderich Dyke — Bainbridge Island, Wash.  
Glenn Egert — Longview, Wash.  
K.C. Ellis — Narbeth, Pa.  
William Emerson — APO New York, N.Y.  
Tom Evers — Wheeling, Ill.  
Tony Falso — Syracuse, N.Y.  
Robert Fawbush — Everett, Wash.  
George Findling — San Diego, Calif.  
Randy Fisher — Portland, Ore.  
Bill Fotheringham Jr. — Seattle, Wash.  
Joseph Freeman — Hingham, Mass.  
John Gibbons — Bedford, Mass.  
Paul T. Gieser — Minneapolis, Minn.  
Forrest Ginn — North Pole, Alaska  
Robert Googin — The Hop Shoppe, Cazenovia, N.Y.  
Sanford S. Gottesman — New York, N.Y.  
Scott Gottwald — Littleton, Colo.  
Dan Griffith — San Jose, Calif.  
Alex Groves — Salt Lake City, Utah  
Gary and Cathy Halifax — Halifax Hop & Vine Supply, Fruitvale, B.C., Canada  
James Hansen — Sparks, Nev.  
John Hawkins — Williamette, Conn.  
Hans Hopf — Weissbierbrauerei Hans Hopf KG, Miesbach, Germany  
Rodney Howard — Oakley, Calif.  
Gary E. Huff — Gresham, Ore.  
Steve Hughes — Hayward, Calif.  
George Hummel — Philadelphia, Pa.  
David Hutchinson — Hopkinsville, Ky.  
Jeff Jackson — Taylors, S.C.  
C. Eric Johnson — Arlington, Texas  
David Kane — Cambridge, Mass.  
Stephen Keller — Tallahassee, Fla.  
James Kelly — Celtic Industries, Flanders, N.J.  
Thomas Klein — Arcadia, Calif.  
John W. Knaack — Phoenix, Ariz.  
Mark Knopf — Roanoke, Va.  
Roger Korhase — Boyne City, Mich.  
Lee Kralicek — Mesa, Ariz.  
Jim Krause — Prescott, Wis.  
Ron Kribbs — Naples, Fla.  
Peter La France — On Tap, Brooklyn, N.Y.  
Guy Laflamme — Montreal, Quebec, Canada  
Lake Geneva Brewing Co. — Lake Geneva, Wis.  
Donald E. Lancaster — Rockville, Va.  
James and Stacey Landor — Milan Malt Shoppe, Red Hook, N.Y.  
Rick J. Langbecker — Redmond, Wash.  
Mark Larrow — Beer & Winemaking Supplies, Northampton, Mass.  
Paul A. Larson — Goleta, Calif.  
Mike Leigh — Cleveland, Ohio  
Scott and Diane Leininger — Leininger & Co., Edwardsville, Ill.  
Greg Lentz — Lansing, Mich.  
Walter Lewis — Derry, N.H.  
William Lounsbury — Baltimore, Md.  
Michael Lutz — Dublin, Calif.  
A. Scott Magee — Seattle, Wash.  
Stanley Malec — Fairfield, Conn.  
Kenneth Manzi — Norwood, Mass.  
Mark Marnell — Kingston, N.Y.  
Larry Matthews — Lewiston, Idaho  
Bob Mayerle — Silverthorne Homebrewers Supply, Silverthorne, Colo.  
David McBride — Springfield, Pa.  
Paul "Bear" McClure — Uncasville, Conn.  
David McKinnon — St John's, Newfoundland, Canada  
Colleen McLean-Bowen — Roseburg, Ore.  
Christopher Metzcas — Millbrae, Calif.  
Russell Meyers — State College, Pa.  
Arthur Milberg — Tarzana, Calif.  
Thomas Miller — Sanford, N.C.  
Steve Mills — Bonner Springs, Kan.  
David Q. Mohan — Glen Burnie, Md.  
Randall Mosher — Chicago, Ill.  
Dennis Nail — Midvale, Utah  
Nicola Nicoloff — Poland, Ohio  
Michael Nolan — Kanagawa, Japan  
Dennis Northrop — Sebastopol, Calif.  
Keith Osborne — Charlottetown, Prince Edward Island, Canada  
J. Drew Patterson — Montreal, Quebec, Canada  
Paul Perasso — Denver, Colo.  
Michael Pirasino — Wading River, N.Y.  
Rodger Popielarski — Buffalo, N.Y.  
Marc and Debi Prince — Haiku, Hawaii  
Alton Purciful — Frankfort, Ind.  
Brian Quinn — Albany, N.Y.  
Bradley Reeg — Chicago, Ill.  
John Reese — Brooklyn, N.Y.  
Thomas Ritchie — Honolulu, Hawaii  
Bill and Emily Robertson — Parker, Colo.  
Jim Roe — Seattle, Wash.  
Steven Rollman — Hollis, N.H.  
Gregg Roper — Torrance, Calif.  
The Rough Draft Breweries — Toms River, N.J.  
Allen Rudolph — Redwood City, Calif.  
David Ruesch — Alexandria, Va.  
Charles Ryberg — Ashland, Ore.  
Jan Sahlin — Lakewood, Calif.  
Kent Saltonstall — Rising Gorge Brewery, Edmonds, Wash.  
Richard Santos — Jacksonville, Fla.  
Darin Sato — MiniPubs Hawaii, Honolulu, Hawaii  
James Sauer — Amherst, N.Y.  
Robert Schubert — Naperville, Ill.  
Vincent Schumaker — Puyallup, Wash.  
Russell Schweger — Winfield, Ill.  
Mark S. Scott — South Plain Field, N.J.  
Bob Seuling — Port Jefferson Station, N.Y.  
Scott Skrabanek — Hayward, Calif.  
Tom and Marlee Sondgeroth — Wake Forrest, N.C.  
Joshua Spieler — Brooklyn, N.Y.  
Carter Stein — Gaston, Ore.  
Lat Stevens — Falls Church, Va.  
Robert Stickler — Edmond, Okla.  
Malcolm Stone — Duxbury, Mass.  
Stoppel and Associates — Colorado Springs, Colo.  
Terrence Sullivan — Omaha, Neb.  
Derek Suursoo — Honolulu, Hawaii  
Jeff Tardie — Enfield, Conn.  
Kirk Taylor — Saginaw, Texas  
Tam Thompson — Austin, Texas  
Alan Thornburg — Greensburg, Pa.  
Allan Timins — Scranton, Pa.  
John Van Tuyt — Ankeny, Iowa  
Tom Vanek — Arlington, Va.  
Paul Veselack — Normal, Ill.  
Eric Webster — Des Plaines, Ill.  
Michael B. Weber — Milford, Mass.  
Christopher Williams — Portland, Ore.  
David Wilson — Gulfport, Miss.  
Jeff Wilson — Austin, Texas  
Richard Winkel — Lewiston, Maine  
James Paul Winningham — Memphis, Tenn.  
Nick Wolf — Columbus, Ohio  
Erich Zeiss — Wayzata, Minn.



# JACKSON ON BEER

MICHAEL JACKSON

## No Porter When You Need One

*End of the road in the quest for Russian stout*

**P**erhaps one has to be somewhat obsessed about beer, in all its glorious styles, to chase its ghosts. I suppose I am. There it was before me: it had been the only specialist imperial stout brewery in the Russian Empire.

The town brewery of Tartu, Estonia, has a notable architectural feature. The whole brewery is set around a circular, castellated tower.

Local myth has it that the tower was originally octagonal. One day, while out for a walk, the owner's wife looked at the brewery and decided she did not like the octagonal tower. She told her husband, who had it rebuilt in its present circular shape.

Tartu is a very old town, and one school of thought says the brewery was the first in Estonia. Another says it was built in 1826. Or was it rebuilt then, with its round tower?

An octagonal tower design was incorporated into the shape of the large bottles that stuck in the mind of the Estonian Minister of Agriculture. These bottles bore the crest of Le Coq and are still featured in a poster for the brewery. Yet the tower was clearly round in the photographs from Le Coq's time.

The round tower is more than an architectural quirk. It contains the most unusual maltings I have ever seen. The maltings still work, and in the kiln the grain is turned by a rake pivoted in the center of the circle.

It is an efficient system, reminiscent of the rakes in a mash-tun. I suppose the germinating grain was originally turned in this way too, though today drums are used.

The director of the brewery, a heavy-set, balding man who I

learned was a pillar of the local choral society, told me that some of the barley came from Estonia, the rest from Russia. Hops came from the Ukraine and were in short supply.

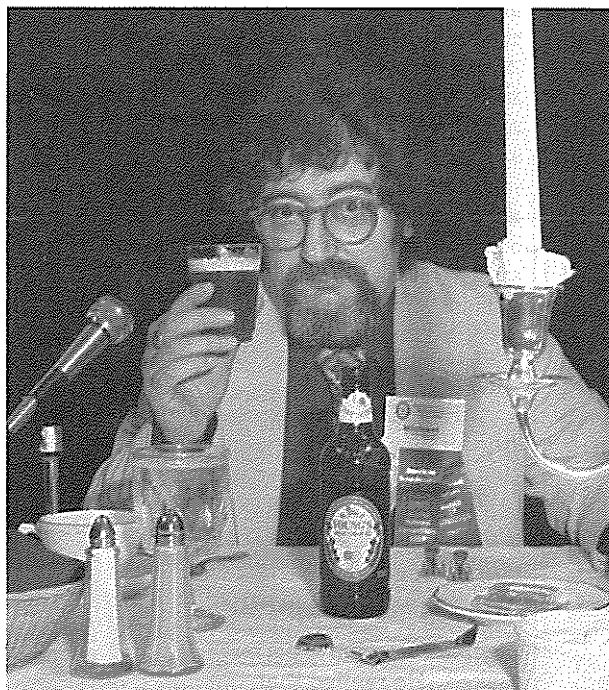
There was no question of specifying varieties, though the Ukrainian hops were low in bitterness and high in aroma like those from Czechoslovakia. In the brew house, I also saw some American Clusters.

The brew house is very old, the antiquity of the vessels encrusted under a coat of cream paint. The di-

rector told me they used double decoction, though the brewmaster was away for the day and it was not possible to confirm details of the procedure.

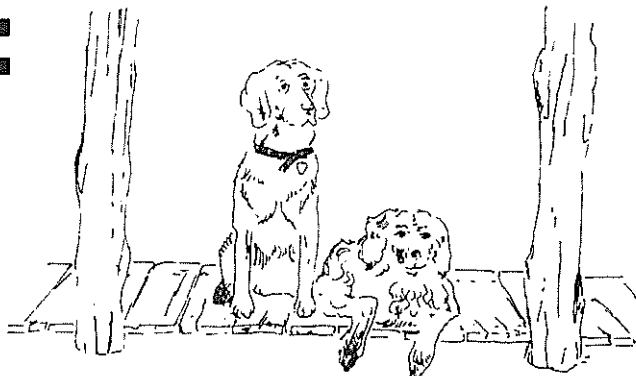
The director was reluctant to show me the fermenting vessels, probably because they are very old. They were made of cast iron in a strange design with gabled lids, painted green so they look like opaque garden hothouses.

The brewery is built on a steep bank overlooking the river on which the town is set. In the traditional manner, the lagering cellars are cut into the hillside. They are the responsibility of a 25-year-old woman who trained as a food technician, and whose blushing smile I found most distracting.



VISA.

MasterCard



## Jasper's Home Brew Supply

*Your Order will be shipped within 24 hours.*

**SEND FOR YOUR FREE CATALOG:**

116 Page Road • Litchfield, NH 03051 • (603) 881-3052

Orders only - 1-800-FOR BREW (outside NH)

ANNOUNCING THE DEVELOPMENT  
of an  
IMPROVED BOTTLE FILLER

### PHIL'S PHILLER

FAST • CONTROLLABLE • SMOOTH • ACCURATE



Fills 12ozs. in about 12 seconds!

Low turbulence and variable speed.

The level remains where it was stopped.

### FIGHTS OXIDATION

Will minimize headspace.

No topping off necessary.

Handcrafted of solid brass, no springs.

**\$9.75** Post Paid

Ohio residents add \$.54 tax each

Send check or money order to:  
Listermann Manufacturing Co.  
4120 Forest Avenue  
Norwood, Ohio 45212

Or contact your local retailer

Also available in wine bottle lengths  
Write or call (513)531-2268 for info

Today, the 300,000-hectoliter brewery makes only lagers. Its cheapest beers are lagered for only 11 days, though its higher-priced products get up to 60.

There are two 1.044 original gravity brews using sugar as an ad-

junct: Kuldne Oder (Golden Barley) and a more hoppy Eripruul (Special). The 1.048 premium is called Rae Olu (City Beer) and has a dash of rice. There is a 1.052 Gladiator and a 1.068 Tartu Olu.

The only bottle the director could find for me to sample was the Rae, which I found firm bodied, thinnish and very dry in the finish. From the lagering vessels I sampled Gladiator, which had a sweet, malty start, a smooth mouth feel and a dry, lightly hoppy finish.

The director recalled having made porter until "about 15 to 20 years ago," which was more recently than I had supposed. He said it had been made to a gravity of 1.080, bottom fermented and lagered for 75 to 90 days.

I asked him if he could imagine the brewery ever making porter again, and his answer surprised me. Perhaps, of course, he was humoring me.

He said the enterprise owned the site for a new brewery but so far there had been no money available to build. If there ever were, perhaps the old brewery could be kept for specialty products, including a porter.

"After all this time, would people still want a porter?" I asked. He replied that

people still remembered it, and added a thought that I have heard before in Eastern Europe: "Women like dark beers."

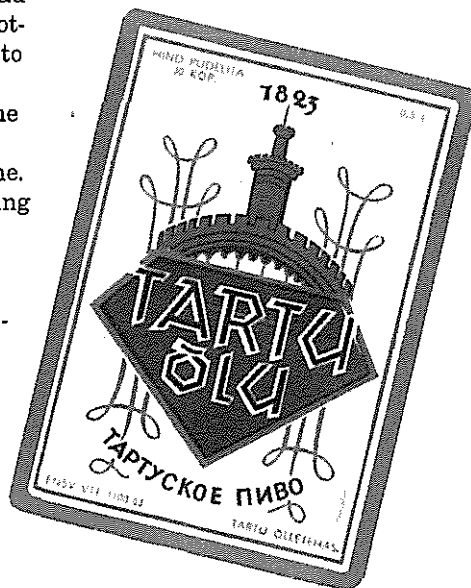
Even he had enjoyed the Diplomat of the Gambrinus Brewery in Plzeň. I am not sure this is being made any longer, but I forebore to mention that.

Instead, I presented him with a 1982 vintage-dated bottle of Courage Russian imperial stout. Despite my attempts to explain it, he viewed it with some puzzlement. He said he would keep it for the museum he one day hopes to open at his brewery.

We went into town, past the 14th century parish church and 17th century city hall, the odd decorative building that could have passed for American "western Victorian" and streets of pastel-colored clapboard houses, to the university. There, in a marble-walled dining room, we had high tea and toasted our encounter in "Champagne"—sparkling wine made in Latvia from Crimean grapes.

Back home, there is news every day from the Baltic states. Estonia is emerging from a slumber into which I had a last-minute glimpse. Journeys can remain in the mind like fitful dreams. None more so than this one.

*This is part three and conclusion of a series on the quest for Russian imperial stout. Reprinted with permission from What's Brewing, newspaper of the Campaign for Real Ale.*



# HOME BREW COOKING WITH THE BREWGAL GOURMET

CANDY SHERMERHORN

## Summertime is Beer-becue Time

**T**he sweat on his brow trickled down the side of his face as he stared, yearning, toward the object of his obsession. Only a few feet away, her breathing came in short gasps as she lusted and yearned for the moment when her lips would touch and her tongue would taste this final prize. They both stood, in the glare of the summer sun, watching, waiting for that moment of triumph and ecstasy. After what seemed an eternity, their long vigil was rewarded and they ravished the succulent morsels of barbecued meat and quaffed frosty mugs of their beloved beer.

Exaggeration of terms? Not at all. Barbecue (or in our case, beer-becue) is a lusty affair of food and libation to be wantonly enjoyed with your closest compatriots. Expectations should build throughout the day as beans are baked, coleslaw is mixed and meat is generously basted with spicy beer-based sauces. By the time juicy perfection is achieved, you actually feel faint from anticipation (hunger too, since you politely turned down lunch to allow more room for feasting). To complement the spicy beer-becue, add the cooling effect of your favorite brew and you will have experienced a hint of heaven.

To turn this culinary fiction into hard reality, it is necessary to heed a few terms and guidelines.

Braising—slowly cook in a tightly

covered pan with a small amount of liquid.

Marinade—a liquid consisting of beer, herbs, spice and oil. The liquid should be acidic to serve as a natural tenderizer and oily to lubricate the meat for juicy results. Marinades are sometimes used for basting.

Searing—quickly brown the outside of meat to seal in the juices.

When purchasing meat to barbecue, market “specials” can be tempting and appear economical, but often come from larger, tougher animals. Because you are devoting not only time but your cherished beer to this barbecue, the few extra dollars for top-quality meat is money well spent. Also, don’t rush the cooking. Most any barbecue expert will tell you that the secret to a superb barbecue is slow cooking, which allows the meat to absorb lots of sauce and become fork tender. This means controlling the temperature of the grill carefully. You will need very high heat for searing and a truly low, steady heat for grilling. For the best, smokiest results, use a grill with a cover.

For pork ribs, the “country-style” cut has a high ratio of meat to bones and is my most frequent choice. Baby-back and side ribs are delicious, but you often pay twice as much for a bone-laden cut. To prepare ribs, wipe them with paper towels to remove any fat or bone particles. Keep rack ribs whole to retain their moisture and simplify the basting and turning.

Sprinkle liberally with freshly ground pepper and allspice and allow to sit at room temperature for 30 minutes.

Have your coals very hot and the grill low to the coals. Sear all sides of the ribs on high heat, making sure they do not scorch. Remove the ribs, raise the grill to the highest position and cover it with heavy-duty foil. Puncture the foil with a fork for ventilation, and place the meat on the grill. Brush liberally with a spicy red sauce (try the Torrid Beer-becue Sauce!). Close the lid, cook five to seven minutes, turn and brush again. Continue brushing and turning until the ribs are cooked through and tender. This will take from 45 minutes to 1 1/4 hours, depending on the cut of rib and your grill heat.



*The brewgal gourmet enjoying the fruits of her labor.*

## Torrid Beer-Becue Sauce

Not for the faint of heart, this rather thick, fruity sauce has a sinus-clearing aroma. It is rich and aggressive on the palate, and leaves a fiery aftertaste!

- 12 ounces of brown ale or Märzen-style beer
- 1/4 cup butter or olive oil
- 1 large onion, finely chopped
- 6 cloves garlic, minced and smashed
- 1 cup plums, fresh or canned (no pits) or whole cranberry sauce
- 12 ounces of tomato sauce or crushed tomatoes in puree
- 2 large or 4 small beef or chicken bouillon cubes
- 1/2 cup red wine vinegar
- 1 teaspoon bottled liquid smoke
- 1/2 cup dark brown sugar
- 1 teaspoon each of ginger and cayenne pepper (or hot chili powder)
- 1 teaspoon each of freshly crushed\* coriander seed, black pepper, cumin seed and mustard seed

*\*The essence of a spice is derived from its volatile oils. When freshly crushed or ground, these oils are released and give full flavor.*

In a small skillet, melt the butter and saute the onion over medium-low heat until limp and translucent. Add the garlic and continue to cook, stirring occasionally until the onion is very limp; set aside.

In a blender or food processor, process the plums and tomato sauce until smooth.

In a three-quart saucepan, heat the beer to a medium simmer and add the bouillon cubes, mashing and stirring until they are dissolved. Add the remaining ingredients, including the sauteed onion and plum-tomato mixture. Bring to a low simmer and cook, stirring frequently, until very thick, 45 minutes to one hour.

Beef chuck short ribs are the meatiest and most flavorful of the beef ribs, but very tough. These ribs need to be marinated four to 24 hours (the Potent Porter marinade is marvelous on these) and then precooked before the actual grilling. To precook the ribs, marinate first, then remove the

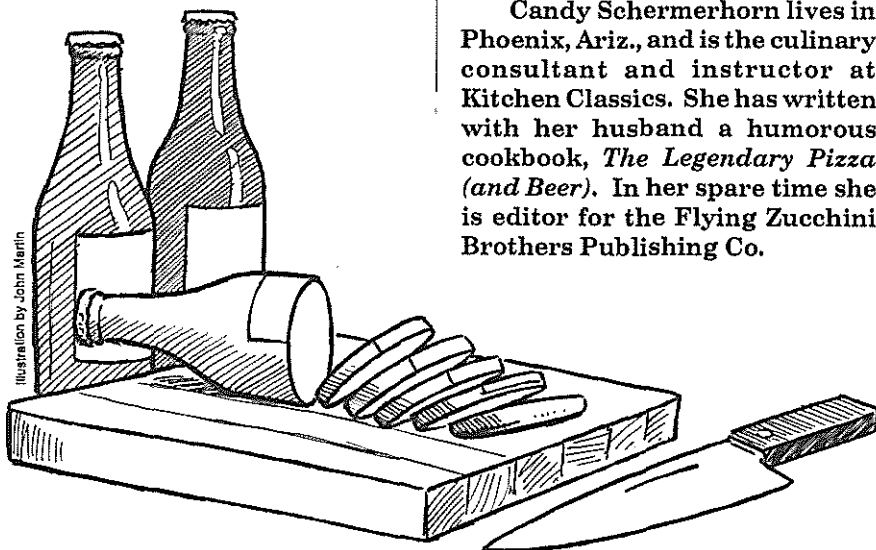
ribs and wipe off excess marinade. Heat the grill to very high and sear the ribs on all sides. Remove and set aside. Place one-half of the marinade in a large, heavy dutch oven and bring to a slow simmer over kitchen range. Add the browned ribs, cover and turn the heat to low. Braise for 45 minutes. Meanwhile, prepare the barbecue rack by covering with foil and poking with a fork for ventilation. When the ribs have finished braising, place them on the grill and cover with the lid. Baste the ribs every five to six minutes with the remaining marinade for one to 1 1/2 hours, maintaining a very low heat.

Beef back ribs, a.k.a. dinosaur ribs, have very long bones with the meat between. Although mostly bone, the meat is tender and no precooking is necessary. Prepare these as you would pork ribs, using a thick red sauce (the Torrid Beer-becue Sauce works well here too). The only difference is that these ribs should be marinated or rubbed with oil before cooking.

## Potent Porter Marinade

A "spirited," assertive marinade, exhibiting full body and complex flavors with an aromatic herbal showing.

- 12 ounces of a porter-style beer
- 2/3 cup extra virgin cold pressed olive oil
- 1/2 cup dry sherry
- 1/4 cup dark soy sauce
- 1 teaspoon bottled liquid smoke
- 2 tablespoons dark sesame oil



- 1/3 cup honey
  - 1 orange, juiced
  - 1 tablespoon sweet paprika
  - 5 large cloves garlic, finely chopped and mashed
  - 2 small shallots, finely chopped and mashed
  - 1 1/2 teaspoons each of dried and crushed thyme, marjoram, oregano
  - 1/2 teaspoon freshly ground pepper
  - 1/2 teaspoon red chili powder or 3 serrano chiles, finely chopped
- Combine all ingredients and allow to sit 30 minutes. Marinate the ribs four to 18 hours in the refrigerator, turning occasionally.

## Great Barbecue Coleslaw

Trust me, this is superb!

- 1 large head green cabbage, shredded
- 1/4 head red cabbage, shredded
- 2 carrots, grated or julienned
- 1 large onion, finely chopped
- 2 cups mayonnaise
- 1/2 cup cider vinegar
- 1/3 cup sugar
- 1/2 teaspoon fresh ground cumin
- 1 teaspoon celery seed
- 1 to 2 teaspoons dried mustard
- salt and pepper to taste

Combine the cabbage, carrots and onion. In a separate bowl, whisk together the mayonnaise, vinegar, sugar, cumin, celery seed and dried mustard. Add salt and pepper to taste. Pour over the coleslaw, toss and refrigerate for one hour before serving.

Candy Schermerhorn lives in Phoenix, Ariz., and is the culinary consultant and instructor at Kitchen Classics. She has written with her husband a humorous cookbook, *The Legendary Pizza (and Beer)*. In her spare time she is editor for the Flying Zucchini Brothers Publishing Co.



**R**emember when there were fewer than 30 breweries in America? It was a time when no one knew what a brewpub was, and the only people who really cared were dubbed “beer snobs” and fanatics by the light-lager-swilling masses.

In the early 1980s, most micro- and pubbreweries were only a gleam in the eye of the brewer. In 1981 Sierra Nevada and Boulder Beer had just opened, and Bert Grant's Yakima Brewing and Malting Co. was still under construction. Bud Light was first introduced on the market that year, and the first Great American Beer Festival took place in Boulder, Colo., as part of the fourth annual AHA Homebrew/Microbrewery Conference.

The idea for a U.S. beer festival struck Charlie Papazian, president of the American Homebrewers Association, after a trip to Great Britain. He had judged and poured beer at the Campaign for Real Ale's Great British Beer Festival in 1981 and thought a festival patterned after the British event would help call attention to America's beer tradition. At the time, only two U.S. microbrewers were operating. Regional breweries were going out of business all over the country, and a rise in import sales indicated the loss of the sense of quality beer taste in the drinking public. America's long history of traditional beer styles was being forgotten rapidly.

“It was a totally outrageous idea at the time,” Papazian said. He and a bunch of local homebrewers sat around the living room floor, poring over the few beer books available, looking for names of the few remaining U.S. breweries. Boulder Beer's Tom Burns helped the group contact brewers, which at the time were mostly large national companies. John Devlin, owner of a local trucking company, arranged for a refrigerated tractor-trailer to wend its way around the East Coast and back to Denver, picking up beers from various brewers along the way. The truck made it back in time—barely. The top of the trailer was partially demolished at a low underpass in Pennsylvania, and the shipment was delayed in Kansas by a rash of tornados. The beer limped into Boulder a mere 24 hours before the festival, much to the relief of the organizers.

The craft beer movement was in its infancy during the first festival. Sierra Nevada, Boulder Beer and Anchor Brewing Co. were the only craft brewers around that could attend, so America's big brewers made up the bulk of the 20 breweries and 35 beers. In fact, Coors unveiled its Killian's Irish Red at the first GABF. Homebrewers attending the fourth annual AHA Homebrew/Microbrewery Conference dreamed of serving their best bitter to appreciative beer lovers and discussed plans with operating brewers in an atmosphere of “youthful idealism.”

The trials and tribulations continued in the early years of the GABF. The Festival again was held in Boulder, this time under a big-top tent amid gigantic thunderstorms and flash-flood warnings, accompanied by bluegrass

# Ten years of



---

DAN FINK, Staff Writer

---

*"Of all the beer joints in all the world, she had to walk into mine."*

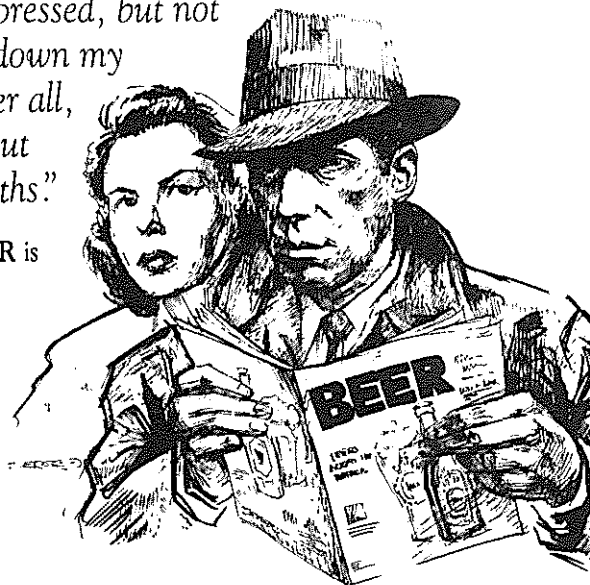
*"She was beautiful, almost too beautiful.*

*She had a magazine in her hand. Right then I knew how she found out. She was smart.*

*She'd spotted me in the pages of All About Beer, between the great articles on the finest beers, greatest breweries, and the best pubs and bars in the world.*

*I was impressed, but not enough to put down my magazine. After all, it only comes out every two months."*

ALL ABOUT BEER is now available at a special price of \$5.50 off the newsstand cover price. And a dual subscription to All About Beer and Suds 'n Stuff is only \$30 clams.



**SAVE \$5.50 OFF THE COVER PRICE OF ALL ABOUT BEER MAGAZINE**

- ☐ New Subscriber    ☐ Renewal of a Satisfied Customer
- ☐ All About Beer \$20.00 U.S., \$30.00 Mexico/Canada, \$48.00 Overseas
- ☐ Suds 'n Stuff \$15.00 U.S., \$20.00 Mexico/Canada, \$25.00 Overseas
- ☐ All About Beer & Suds 'n Stuff \$30.00 U.S., \$45.00 Mexico/Canada, \$65.00 Overseas
- Offer Expires January 31, 1992

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Payment enclosed: ( ) (check/money order) \$ \_\_\_\_\_

Bill: ( ) Visa ( ) Mastercard # \_\_\_\_\_

Signature \_\_\_\_\_ Exp. Date \_\_\_\_\_

ALL ABOUT BEER P.O. Box 586402 DEPT -8 OCEANSIDE, CA 92058

bands and a symphony orchestra. And slowly but surely, the number of microbrewed craft beers started to increase.

By 1984, the festival moved to Denver, drew 50 breweries serving 70 beers, and the Microbrewers Conference split off into a separate symposium for microbrewers and microbrewer wannabes. While the industry gained momentum, brewers lobbied for law changes to permit brewpubs in many states. Equipment manufacturers started catering to small brewers so fewer operations had to scrounge for makeshift equipment.

Donated help from brewers, distributors and shippers continued to grow. Early on, the professionals who donated help were the real beer enthusiasts, according to Festival Director Daniel Bradford. That network has expanded to include many major brewers and distributors, not just the connoisseurs, Bradford said. "At first, all of the beer could fit in one refrigerated truck. Now it takes up a whole warehouse."

Alas, fiscal realities of the 1980s and 80-hour work weeks took their toll on some new brewers. Many didn't make it, but the strong survived, and new operations learned from the mistakes of those that failed. The Great American Beer Festival continued to grow, learning from the successes and failures of the entire industry. By 1985, a new force entered the craft brewing market—the contract beer. These brews are private brands brewed to the specifications of the designer but made in a brewery that has capacity to spare.

Samuel Adams Boston Lager was the first contract beer, and it made a big splash. Many microbrewers bristled at a brew made hundreds of miles away yet marketed to compete as a local brand. One microbrewer went so far as to hang a sign proclaiming "real brewery" by their display at the 1985 festival. But Sam Adams took first place in the consumer preference poll that year, leading to their slogan, "The Best Beer in America." The voting by festival-goers was questioned by some brewers who wondered whether the public was voting on the quality of beer or the enthusiasm of marketing campaigns.

By 1987 the event reached maturity, paralleling the industry as a whole. With the help of 180 volunteer servers, 61 breweries offered 120 different beers to 4,500 attendees. The professional panel tasting by professional brewers and taste panelists from around the world was implemented to judge beers in 12 categories, a process that took more than 15 hours. The beers continued to get better and many formerly


"obscure" styles reached and tantalized the beer-drinking public each year.

"The beers at the Great American Beer Festival have been changing in two dimensions," said Bradford. "They have been growing cleaner and more consistent without sacrificing character. The beers are much better brewed, and there's now a huge proliferation of stylistic variety—the most exciting aspect of the revolution." Examples of expansion of varieties are the resurgence of barley wines, altbiers, wheat beers and fruit beers, which were almost unheard of during the festival's first years.

The growth in number of brewers, beers, beer quality and variety continued steadily through 1990, which saw 6,200 festival-goers enjoying 481 beers—nearly 200 on draft—from 150 breweries. Twenty professional judges picked winners in 23 categories, and the consumer preference poll was dropped, Bradford said, because it had been eclipsed by the increasing recognition of the professional panel tasting.

Even more unique varieties such

as pumpkin ale and chili pepper beer were presented, and the quality was uniformly high. Beer storage, transportation and tapping systems grew in scope to meet the demands of serving nearly 500 beers. The 200 draft beers (a dramatic increase over previous years) presented logistical problems that were solved by using an innovative tapping system employing livestock troughs to hold kegs and ice. CO<sub>2</sub> tanks were located at the end of each row of kegs.

1991 marks the 10th annual Great American Beer Festival. The number of beers, brewers and beer lovers should continue to grow. This year's AHA Homebrewer of the Year will win a trip to the festival for two days of foam and fun, and beer lovers from all over the world will again congregate to taste the best that American brewers have to offer. The opportunities to quaff fine beer and meet the people who made it are waiting for you in Denver! The 1990 Great American Beer Festival will be Oct. 4 and 5 at the Denver Merchandise Mart. Contact the Association of Brewers for more information. 

## Retailers Handbook

### *How to Succeed as a Homebrew Supplier*

Pricing, Promotion,  
Questionnaires,  
Direct Mail, Inventory,  
Advertising,  
and much more!

### *The Very Best for Your Success*

8 1/2 x 11, 147 pp., softcover  
\$50.00 (AHA members \$35.00)  
Plus \$4.00 domestic P & H.

Brewers Publications  
PO Box 287, Boulder, CO 80306-0287  
(303) 447-0816, FAX (303) 447-2825

## Great Fermentations of Santa Rosa

Advice (707) 544-2520

Catalogs and Mail Orders (800) 544-1867

### *The Beverage People*

*Our national award winning staff brings you  
a level of expertise unmatched anywhere else.*

*We would like to take this opportunity to  
welcome Paddy Giffen to our staff.*

*1990 HWTBA National Champion and runner up Best  
of Show at the 1990 AHA Nationals.*



840 Piner Road, #14 Santa Rosa, CA 95403 (707) 544-2520

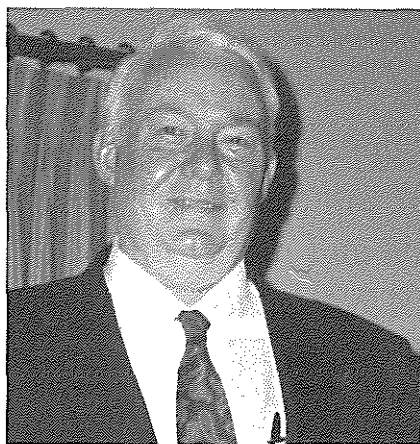
# Don't You Know There's a War Going On?

*The following article is based on personal recollections of the early years of World War II from a home-brewer's perspective. The insight into rationed supplies is what caught the zymurgy staff's attention. The current neo-Prohibition movement makes rationing a concept worth understanding. Imagine the plight of our hobby if freedom to make or consume beer is tampered with. We suggest you read this article and substitute the word "Prohibition" for "wartime."*



few years ago, public television aired "We'll Meet Again," a British series that dramatized the relationships that

sprang up during World War II between the people in a small English town and the American fliers at a newly established bomber base. In one scene a recently arrived American officer asks the town tobacconist for a favorite cigar that was long un-



GEORGE A. O'BRIEN

available in England. He is tartly scolded with, "Don't you know there's a war on?"

Hearing that old cliché brought back many memories. It was used everywhere to remind people that, because of the war, the good things of life were in very short supply, if indeed they were available at all. Scarcities and suffering on the home front were burdens to be borne courageously and quietly by all "for the duration."

In those days imported and, to a great extent, domestic luxuries were things of the past. One made do with what one had before the war, scrounged the best one could or traded on the black market for the few treats that still remained. In America, for example, a bottle of really good prewar whiskey was worth a king's ransom, and even nice girls would do anything, just anything, for a pair of nylon stockings. Elsewhere in this bombed-out, war-torn world, American cigarettes and chewing gum were the common currency, traded for every sort of favor, service and goods.

That's how it was in a global war.

Rationing being what it was, commercial breweries of the day strained to get all they could out of each pound of malt, cereal or sugar. The result was the watery beverage known as "3.2 beer," despised by all but refused by few. Contemporary memories of an even worse product, Prohibition-style homebrew, plus the dearth of strictly rationed sugar and malt syrup stayed Americans from doing anything other than grumble about it. As a matter of fact, this tacit acceptance of 3.2 beer

set the stage for the long history of second-rate American brews that pretty much continues to this day.

But so much for yesteryear and memories of wartime austerity. Times have turned and today we see luxuries begging, commodities galore, competitive prices, well-stocked liquor stores and choosy women. Our cups runneth over. But the pendulum swings both ways: from today's abundance to tomorrow's scarcity, and from scarcity back to abundance again in a never-ending cycle. Which brings us to our point.

What would a civilian home beermaker in grim times wish to have stored earlier to relieve misery now? What would one wish to have known "if one had only known"?

First, let's examine the wretched condition of a civilian in wartime.

Imports of all things have almost ceased, as international trade dwindles to the vanishing point. Many domestic commodities are rationed, some even expropriated in toto because of the "national emergency." Luxuries have disappeared into hoards held by black market "profiteers." Prices are controlled, but nothing is available at those prices. Necessities are poorly made and of shoddy materials because the best labor and materials are only available on government allocations. Gray markets appear, offering expensive but worthless substitutes for the real thing. Recycling is obligatory; scrap drives are a national mania. "Tie-in sales" abound, i.e., one awful item and one so-so item for the price of two good ones, and no good ones are to be found. Few new replacement parts are available to re-





Illustration by John Martin

pair old machinery; worn-out equipment is cannibalized to keep other worn-out equipment running. And the answer to all appeals for relief is, always,

"Don't you know there's a war on?"

An amateur beermaker who wants to survive these conditions has to think a long way ahead. One should anticipate the following specific problems. Imported goods of any kind will be unavailable without a government priority. Domestic malt will be sold only to commercial breweries with top priority, and even they will have to stretch their supply to the limit. There will be no sharing: amateurs will receive only malts that are stale, inferior or mis-malted. The same applies to domestic hops. Imported hops? Forget it. Imported malt extracts? Same answer.

Special yeasts in small packages will be another casualty, but prewar supplies can be eked out quite a distance, first with refrigeration and freezing, then as supplies disappear, with agar slant cultures.

General public demand for limited supplies of sugar will put this food on a strictly rationed basis. Corn sweeteners will supplant im-

ported cane sugar wherever they can, but even this will not be enough to decontrol it. Artificial sweeteners will become the "patriotic" thing to use, especially in soft drinks.

To fund the national effort, taxes on all spirits will be raised to unheard of levels. This will put the moonshiners back in business and quickly exhaust gray market supplies of all fermentables. In the enforcement hysteria that follows, unsympathetic authorities will demand that homebrewers justify or even cease their "illegal production of alcoholic beverages." Keep in mind that wartime civil rights are not the same as peacetime civil rights. So, keep a low profile.

All energy will be rationed so fuel used for mashing and brewing and the electricity for refrigeration will be tight. So will the distilled water preferred by some homebrewers.

Returnable glass bottles will make a comeback because the metal in cans will be needed for the war effort and plastic throwaways will be considered wasteful of scarce resources. As a result, crown caps will be in fair supply, but, as in the case of malt grain, the quality will not be the best.

Special additives: nutrients, heading powder, gypsum, finings, etc., will have to be acquired by the beermaker before they disappear entirely from the supplier's shelves. Likewise, good equipment will disappear and improvised set-ups will inevitably become the rule. Chlorine bleach sanitizer will continue to be available, but sulfites and metabisulfites will be hard to obtain.

Copper, stainless steel, brass and tin, all metals used in ordnance as well as in brewing equipment, will be snapped up the moment there's a hint of shortages. When the emergency actually arrives, all commercial stocks of these metals will be expropriated for government allocations. Manufactured items made of these metals may also be expropriated for military use. Other metals and plastics will be hard to find in the forms desired; manpower and materials will not be provided to supply substitutes for low-priority uses. Patriotic scrap drives will quickly absorb the bits and pieces of these materials that remain in the public's hands. And on and on. Things are tough all over:

"Don't you know there's a war on?"

What should a prudent, far-sighted homebrewer who wants to continue making beer do to anticipate this scenario when one sees it coming? Here are a few long and short-range suggestions.

Cultivate one or more sympathetic growers of barley or grow your own as an experiment. Learn to malt brewing cereals of the kinds that can be grown locally and adapt these malts to your own process and equipment before things get grim.

# EDME

## Malt Products

For convenient beer making  
Rich tasting, economical

Complete line of whole-sale winemaking and beermaking supplies.



30311 Clemens Drive  
Westlake, Ohio 44145  
(800) 628-6115

Plant hop vines and learn their ways and how to nurture and preserve them. Look into natural hop substitutes. Learn to cultivate and preserve brewing yeasts and agar slants. Learn to lager without refrigeration using cool caves and harvest ice, for example. Learn something of the science of grain storage and fumigation. Get a grain mill and learn how to brew from scratch. Obtain a standby wood stove and line up a source of firewood for mashing and brewing, foreseeing that the use of metered fuels such as propane, gasoline, natural gas and electricity will be sharply restricted in wartime.

It's just plain Robinson Crusoe brewing. You get the idea.

And anticipate that, as things get worse, your homebrew supplier may be drafted or perhaps go out of business for lack of items to sell.

Buy while supplies are still relatively cheap and abundant. At all costs, avoid calling attention to such purchases; nasty things happen to hoarders whose stashes are revealed later when shortages are universal,

and people are desperate. Generally avoid keeping perishables such as loose hops, enzymes and liquid yeasts for long periods. Hop extracts keep better than pellets (except for manufacturer-packed pellets). Dry malt extracts keep better than syrups. So the combination, hopped dry malt extract, has to be the last word in bomb-shelter brewing.

Properly stored stocks of commercially malted grains will prove to be a boon in times of shortage, but buy in ample time to lay them away properly. It goes without saying that an efficient and sturdy grain mill, and perhaps spare parts, will be needed to make the grist.

One does not live on liquid bread alone. A good supply should include the following items, in portions that will allow for opportune gifts and barter, along with the occasional personal indulgence. Buy only the recognized top brands; lesser or unknown brands will be scorned as wartime junk. Store imported products such as coffee, tea, woolen clothing, Scotch whiskey, canned beef, chocolate, sardines, selected spices and olive oil. And domestic products such as sugar, soap, tires, stout shoes, automobiles, appliances, cooking fats and oils, etc. It's not a complete list but it's adequate for one's own comfort and it will let you barter for what you lack when it comes to that.

If you can afford it, convert your home brewery from porcelain enamel and plastic to stainless steel or copper. That way you will never have to worry how to replace a chipped kettle or a cracked or melted primary when all such equipment has long since "gone to war." As insurance against a crown cap or bottle shortage, consider investing in a draft system. In the event of hostilities, inexpensive imported systems made of plastic will disappear quickly; costlier domestic stainless-steel systems, new and used, will be snapped up by soft drink companies. So, plan well ahead. And if you decide to adopt such a system, establish a reliable source for CO<sub>2</sub> refills or otherwise provide a suitable method for draft pressures.

If you use water purification

## Learn The Secrets Behind The World's Greatest Beers!

### Now on Home Video - *The Beer Hunter*

Connoisseur Michael Jackson unveils the secrets of the world's greatest beers to you...in *The Beer Hunter*, a fascinating six-part, three-hour series now available on home video from The Discovery Channel for only \$34.95 plus shipping. As a bonus, order now and receive the 171-page Simon & Schuster Pocket Guide to Beer FREE!

Order *The Beer Hunter* for your collection — and open the door to drafty Trappist cellars and high-tech California vat rooms. Discover the formulas for award-winning ale, lager, porter, and stout. Join Michael in sampling the old-world brews of Europe...and savoring the microbrewery masterpieces of the Pacific Northwest.

If you're a brewer or simply love beer, you'll want to add *The Beer Hunter* to your collection now.

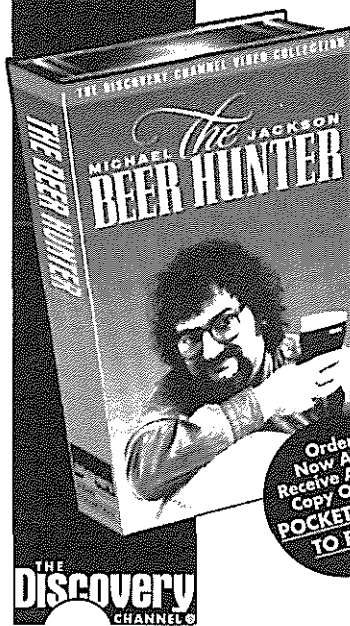
FOR THE FASTEST SERVICE CALL  
**1-800-472-3500**

TO ORDER BY CREDIT CARD TODAY

Or send, \$34.95\* plus \$3.95 shipping and handling to:  
*The Beer Hunter* • P.O. Box 68618 • Indianapolis, IN • 46209-6629

\*MD and IN residents add applicable sales tax

© 1991 The Discovery Channel



Order Now And Receive A FREE Copy Of The POCKET GUIDE TO BEER!

THE DISCOVERY CHANNEL  
VIDEO COLLECTION

and filtering setups, stock up with supplies and repair parts while they are still readily available. The same applies to beer filters and supplies.

Acquaint yourself with fellow beermakers and join a homebrewers' network to help one another obtain or exchange scarce supplies and equipment. It will also establish a discreet and grateful outlet for your own brewing supplies if you yourself are drafted and must abandon beermaking for the duration.

Be aware that, in times of national emergency and shortages, having too much of a good thing on hand can lead one into a good deal of trouble. Very early in the emergency, the authorities will demand that everyone declare their stocks of certain scarce items; tour ration books, when issued, will be reduced by the amounts that you have declared. "It's only fair," they'll say. Fines and confiscation will result when undeclared hoards are discovered later. But discovery depends mostly on reports from jealous neighbors. So keep your supplies obscure, your attitude cooperative and your mouth shut.

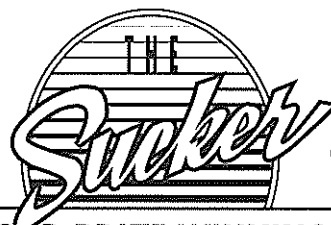
After all the bells have rung and the Champagne has been poured, wait until the pipelines are full of good supplies and equipment again before relaxing your austere wartime beermaking methods. It may surprise you how long it takes to get just what you need at a reasonable price and how long it takes for the authorities to remove wartime controls.

And when good times and plenty do return—they always do—you'll look back in amusement at all the subterfuges of the dark days past, have a worry-free homebrew and breathe a wish that you never again hear that awful charge,

"Don't you know there's a war on?"

George O'Brien has been active in home beermaking and winemaking since 1976 and is the owner of O'Brien's Cellar Supplies of Wayne, Ill. This article is based on his combined experiences in the business and on the home front during World War II.

Quick  
& Sterile  
Siphoning



"Every Homebrewer  
Should Have One."  
(Dan Fink, Zymurgy Spring '91)

**FOR YOUR PRIZE WINNING BEER**

Order Today!

Just \$17.50 plus 3.00 Shipping & handling • Satisfaction Guaranteed or your money back

WIGGLESWORTH • P.O. BOX 880601, SAN FRANCISCO, CA 94188 • 415-885-1878

## Beer and wine hobby

Greater Boston's oldest and most complete  
homebrewing and winemaking supplier  
and mail order house.



- QUALITY SUPPLIES
- EXCELLENT SERVICE
- LARGEST SELECTION
- 24 HOUR ORDERLINE / FAST DELIVERY
- FULLY STOCKED WAREHOUSE STORE (617) 933-8818

**FREE CATALOG**

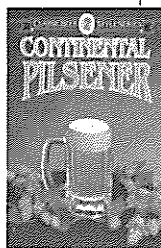
**800-523-5423**

180 New Boston Street, Woburn, MA 01801. FAX: (617) 662-0872

The Classic from the  
Continent. *Continental*

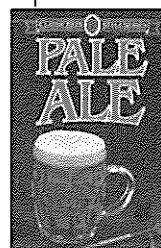
*Pilsener* answers all the  
questions  
you have  
a b o u t  
making,  
enjoying  
and un-

derstanding one of the  
world's greatest, the fa-  
ther of all lagers.



## TWO OF THE FINEST BOOKS ON TWO OF THE FINEST BEER STYLES

England's legend. *Pale*  
*Ale* gives the complete  
picture on the brewer's



favorite ale.  
Recipes,  
history, in-  
gredients  
and tech-  
niques

make this the definitive  
work on the legend of  
England.

5 1/2 X 8 1/2, illus., softcover, \$11.95 each (AHA Members \$9.95 each), plus \$3.00 domestic  
P & H, or \$4.00 for both books. Brewers Publications, PO Box 287, Boulder, CO 80306-0287.  
(303) 447-0816, FAX (303) 447-2825.

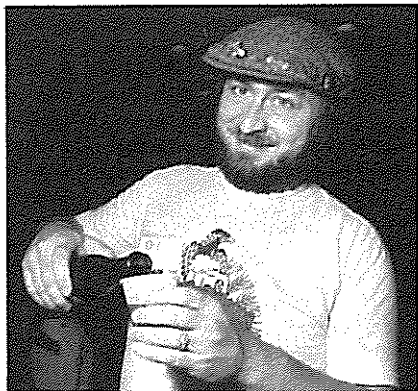


# Pilsner Urquell: The Brewery

## *Uncovering the Unusual*

**P**ilsenský Prazdroj is the Czech name for the brewery we know as Pilsner Urquell, which is a German name meaning *Pilsen's Original Spring*. (Everything in this part of Czechoslovakia seems to have both Czech and German names, reflecting the torn history of the crossroads of Central Europe.) Pilsener, of course, also is the name of a style that includes a broad spectrum, but in this town the style was born in the middle of the last century.

The classic Pilsener style is a pale golden beer with a medium level of alcohol and a full white, pillowy head. It is distinguished by its spicy hop aroma backed by a solid malt foundation. There is enough sweetness to be



DARRYL RICHMAN

just noticeable. The beer has a soft character to it because of the extremely low mineral content in the water used to make it. The aftertaste is balanced and lingering. Behind the hops and malt are a variety of subtle flavors that play just above the sensory threshold to keep the taster interested, including a bit of caramel. These are likely brought on by the long and complex process the brewery goes through to produce this classic beer.

### The Traveling Fool

Long before starting my journey through Europe, I asked Michael Jackson at the 1990 National Conference how I might gain entrance to Pilsner Urquell. He suggested the name of a brewmaster, to whom I immediately wrote. It was with great anticipation that, three weeks later, I held a reply on official green, yellow and red letterhead informing me to phone when I arrived in Prague to arrange for my tour. I was in! What could be simpler?

Two months later when I arrived in Prague, I made my way to the central post office to telephone the brewery. It was difficult to communicate by voice alone because I don't speak Czech. But I did manage to make myself understood. My tour was tentatively set for the following day.

Upon my arrival in Plzeň I had to

find the brewery. Because I had been too stupid to ask for directions the day before, this meant that I was in for an encounter of the worst kind—a visit to Cedok. Cedok is the national tourist agency, and their offices are full of mouldering tourists who have been ignored to death. Naturally, Murphy was my copilot and I had the most unnatural experience—the agent to whom I spoke *wanted* to help me. Although I merely wanted a map and directions to the brewery, I found that I might be able to get on a tour scheduled later that day and that there was no way I could see the brewery without their aid and so on. I did manage to get the map.

After navigating Plzeň's streets I found the brewery entrance. Here I had a discussion with the guard about whether the date on my letter of introduction indicated when it was written or when I could visit. I got in anyway.

This left me loose in the compound of *the fountainhead of lagers* with vague directions about where I might find the brewmaster's quarters. This led me to a building with the encouraging sign "Laborator" so I parked and asked the first person who walked out if this was the right place. Little did I know that I had run into just the right man: Jaroslav Rous, brewmaster. It soon turned out that the brewmaster I had spoken to was not available that day, and my visit

was not expected officially.

I was soon in a room with Ivo Hlaváček, the former general manager of the brewery. After a few polite questions probing my interest and purpose, it was agreed that I would get Brewmaster Jaroslav Rous as a guide! *O frabjous day! Callooh! Callay!*

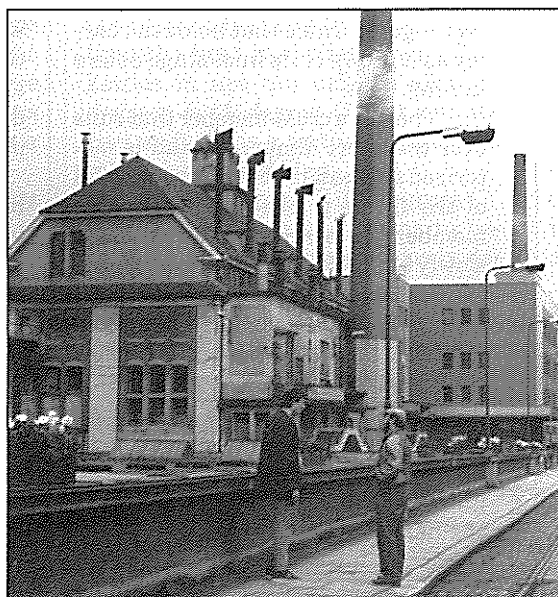
### History

We then settled down to a cup of espresso while I learned that Plzeň has long been a brewing center. Brewing was performed in each house on a small scale. House breweries are recorded back to the 13th century, when the citizens of Plzeň formed a brewing union. This guaranteed the rights of those in the union to produce beer—and naturally made it illegal for others.

The Pilsner Urquell brewery was built in 1842, at about the same time as the Schwechat Brewery of Vienna and Carlsberg in Copenhagen. These sister breweries all began using Munich's pure lager yeast, spreading the lager brewing concept across Europe.

Right from the start, Pilsner Urquell was a smash hit. First in Prague, and by 1848 spreading out to Germany and Austria. Sagely, the name was trademarked in 1859, thus protecting it from marauding robber barons. The first exports to the United States occurred in 1871, and by 1913 Pilsner Urquell output reached one million hl (over 850,000 barrels) of beer. At this point it was the largest brewery in Central Europe.

However, neither the war nor the ensuing peace was good for Pilsner Urquell. Although independent Czechoslovakia was formed in 1918



**Brewmaster Rous and the author in front of the old brewhouse. The newer brewhouse is in the background.**

by the merger of Bohemia, Moravia and parts of Silesia and Slovakia, it followed the rest of Europe into the tailspin of the depression. It was only after the end of the second world war that the brewery was redeveloped. Today Pilsner Urquell produces over 1.2 million hl (over a million barrels). Of their output, an amazing 60 percent is draft.

### Raw Materials

Plzeň is ideally suited as a brewing town because of its close proximity to the hop and barley-growing regions, as well as its fine water. It seems to the tourist driving across the countryside that whatever open land isn't covered with hop trellises is growing barley.

The fine summer barley grown across Bohemia and Moravia (the southern third of the country) is some of the most coveted malting barley in Europe. Without such a pale-colored barley malt, the triple decoction and long boil at Pilsner Urquell would surely produce a much darker beer.

The unparalleled Zatec red hops (in German, *Saaz*, pronounced "zotz") are world renowned. Small hop farms dot the countryside with their tall posts supporting heavy ropes 15 or 20 feet overhead. The spicy aroma of Saaz is unmatched, and because they are used exclusively in Pilsner

Urquell's beer, they are a major taste and aroma component. (I was, unfortunately, unable to verify the rumor that Saaz obtain their almost mystical properties from being compressed between the legs of young Czech virgins.)

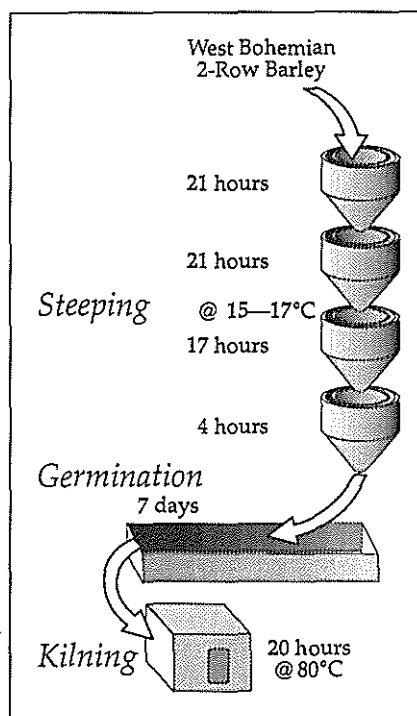
Pilsner Urquell's brewing liquor comes from a spring (urquell, remember) or from the city's mains. In either case, the water is very soft (although the brewery must settle and treat the city water to match the spring water), and it has about 70 ppm hardness as calcium carbonate. After boiling, most of this temporary hardness drops out, leaving very little mineral content. This is important because it means there is little buffering capacity to resist acidification. It also means that flavor characteristics like hop bitterness are not distorted and amplified, which is one reason Pilsner Urquell is such an uncommonly smooth beer in spite of its high bittering levels.

### The Maltster's Tale

The Pilsner Urquell grounds include two malting works, run as a separate company. But the close proximity of their largest customer and the fact that malt works and brewery were arms of the same "holding company" under the Communist system mean that the maltings are dedicated to producing what Pilsner Urquell specifies. They also supply malt to many of the other breweries. Rous insisted that Pilsner Urquell gets their best product, however. There is a new, larger maltings two km away, which was built in 1988 and opened in 1989.

We walked over to the nearest





**Malting stages at Pilsner Urquell.**

malt house to see how they work. Curiously, Rous did not know a great deal about the maltings—he had to get a guide for both of us. He explained that he is in charge of the brewing activities (and previously had run the fermentation cellars) but the brewmasters and the maltsters don't get together much.

### The Process

The Pilsner Urquell maltings are based on a gravity system not unlike that used in brew houses. The barley comes into the plant and goes into a storage silo. From there it is cleaned of dirt and foreign seeds, and brought to the top of the six-story building where it goes into the first of a series of steep tanks.

The steep tanks provide the environment for the barley to wake up and grow. Barley has a natural dormancy that must be overcome before it will germinate. Barley has evolved this mechanism to preserve the seed through the harsh winter and into the next spring. The steeping process is repeated three times to stimulate the seed to germinate. Each steeping takes about 21 hours.

Finally, after four days the now-germinating barley ends up in a ger-

mination bed. This is a long, shallow rectangular frame that holds the barley as it grows to its final stage before kilning.

There is a cross-member that runs over the short dimension and is motorized so it can proceed from one end of the frame to the other. On this member are a series of screws that slowly turn, lifting and separating the germinating grain so the rootlets will not grow together and form an impenetrable mass. This also aids airflow through the bed, which is held at 60 degrees F (15.5 degrees C) and 47 percent moisture.

The barley is carefully watched until the acrospire, or growing tip of the barley plant, reaches two-thirds to three-quarters of the way around the seed. At this point, after about seven days, the barley is sufficiently modified and the germinated plantlets are moved off to the kilns. For comparison, in English malt the acrospire is usually allowed to grow all the way to the top of the seed; most two-row malt is allowed to reach the three-quarter point before germination is stopped.

The malt produced has a color of 3.8 to 4.0 EBC (about 1.9 to 2.0° Lovibond), which is pale indeed, but not as pale as most six-row, or even two-row malts in this country. In fact, this is very near the figure quoted

protein number is a figure of merit with respect to the amount of adjuncts that can be added to the mash without affecting yeast health and can also indicate potential haze and heading problems.

So ended our tour of the malt house. As we began to walk the few blocks back to the brew house to see how this carefully created malt is used, it began to drizzle, and because I had left my umbrella in the car, my notes, which I was still furiously scribbling, started to run.

### Brewing

Pilsner Urquell has had its ups and downs through the years. Rather than replacing one system with another as the demand required, they have taken the unusual approach of adding more systems of the same type. This would be akin to buying a new five-gallon pot and stove each time a homebrewer wanted to expand output, rather than upgrading to one that handles 10 gallons.

This is terrible from an efficiency standpoint. It requires more staff to clean and maintain each vessel. There are greater losses per volume of product, through heating, cooling and cleaning. (Pilsner Urquell uses 20 L of water to make one L of beer, which is a very poor rate; average breweries

achieve about 8 to 1.)

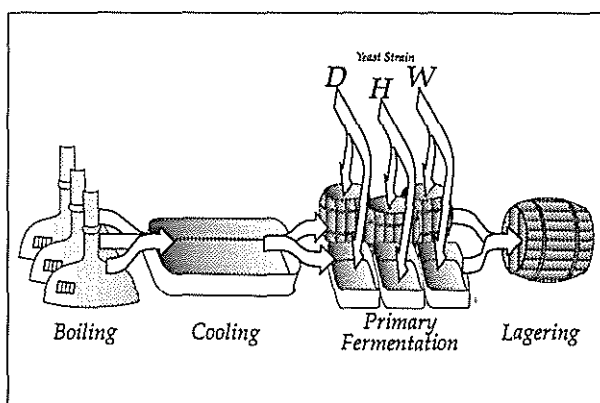
It also requires more building space. From a financial standpoint, this doesn't make sense.

Rous explained that past brewmasters have felt that scaling up by replacing the equipment would alter the character of beer. He went on to say that because the beer's unique character accounted for growth, this is what should be

preserved when building up. This philosophy has been carried through all aspects of production where a change would alter the beer.

### Overview of Techniques

In quick preface, Pilsner Urquell



**The Pilsner Urquell fermentation process.**

for English pale malt. This is one reason that Pilsner Urquell is not as light in color as American or even many continental lagers.

The malt ends up with 11.5 percent protein, on average. This is low compared to American crops, which tend toward 12.5 to 14 percent. The

is brewed only with pale malt in a triple decoction mash. The Saaz hops are added in three charges over the course of a four-hour boil. The entire process requires an incredible 11 hours and 20 minutes. They do 11 brews a week.

Mashing and boiling occur in pairs of copper vessels, each holding 150 to 170 hl. They have 20 sets of these kettles in two brew houses. In the off-season they only use 10, but as summer advances, 16 or more may be in action. In a set, one is directly fired by natural gas; the other is an unheated mash-lauter-tun.

### Decoction Process

Most breweries in the United States mash using the step infusion process. In this approach, the crushed malt is mixed with heated water and each new temperature plateau, or rest, is attained by heating the entire mash. Pilsner Urquell uses the decoction process where a portion of the mash is drawn off and boiled, then returned to the mash to gain each successive rest.

If you have read *Brewing Lager Beer* by Greg Noonan, you are probably aware that decoction mashing gets a better extract than step infusion. This is because the high heat and physical activity in boiling break down all the remaining intact protein matrix in the malt, allowing the starch-reducing enzymes to reach all of the starch.

The decoction at Pilsner Urquell begins when the crushed malt is doughed in with cold water, enough to produce a smooth paste and prevent subsequent clumping. Then boiling water is added to reach the first rest of 97 degrees F (36 degrees C). This is an acidifying rest, and also provides some time for the enzymes and free starch to go into solution. After a few minutes' rest, the thickest portion of the mash is transferred to the kettle.

Here the decoct is brought to a boil, but not until it goes through a standard step-infusion-like series of rests. As each rest is obtained, it loosens more starch from the grip of the matrix and provides the enzymes present the opportunity to act on it.

The first step is to 126 degrees F (52 degrees C)—a protein rest. At this point, larger proteins are degraded to smaller ones, which are

useful for yeast metabolism and head retention. This lasts 10 minutes, and then the heat is applied again. The kettles in use can achieve about 2 degrees F (1 degree C) per minute rise, so it takes a further 10 minutes to reach the next step.

At 144 degrees F (62 degrees C), the b-amylase enzyme begins to become active. This enzyme slowly degrades starch directly into maltose. The rest is for 20 minutes. Then the flame is turned up again. At about 159 degrees F (70 degrees C), a further 20-

minute rest is conducted while the a-amylase enzyme takes over. This enzyme can break down starch more rapidly than b-amylase, but not all of the sugars that result are fermentable.

Finally, the mash is raised to a boil and held for 10 minutes. Then the decoct is transferred back into the mash-tun, where it is mixed vigorously with the thinner portion.

The first decoction raises the entire mash to 126 degrees F (52 degrees C). The remaining two decoctions raise the whole mash to 144 degrees F (62

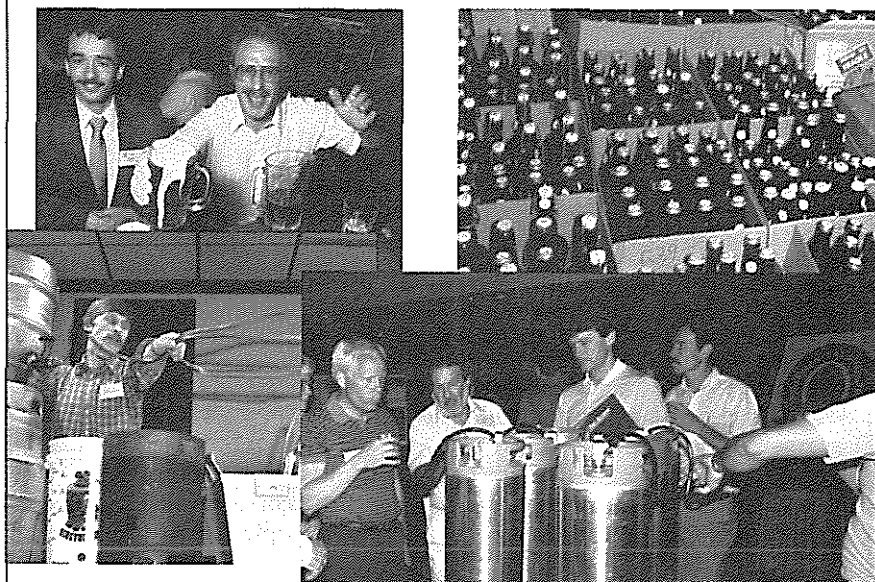
## SCHOOL OF BREWING

The American Homebrewers Association

presents

### The National Homebrew Conference & Competition

June 19-22, 1991, Manchester, New Hampshire



Come to beer summer school. Hear the finest speakers and meet some of the best brewers, your classmates. Along with hundreds of other homebrewers you'll learn more than you can imagine. You'll also taste some of the best beers ever made.

### The National Homebrew Conference & Competition

For more information about the Conference and how you can participate, write or call the American Homebrewers Association, PO Box 287, Boulder, CO 80306-0287, (303) 447-0816, FAX (303) 447-2825.

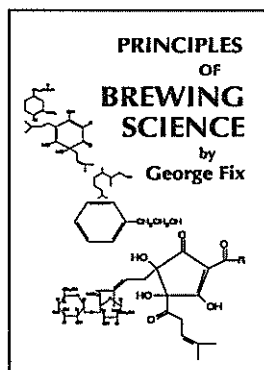
A Must for the Serious Brewer!

# PRINCIPLES OF BREWING SCIENCE

by  
**George Fix**

A stand-alone guide  
to the chemistry  
and biochemistry  
of brewing.

You've read all his articles. You've  
heard his talks. Now, here's his book.



Softcover, 250 pp., illus.

\$29.95 (AHA Members \$24.95), plus \$3.00 domestic P & H.

Brewers Publications, PO Box 287, Boulder, CO, 80306-0287, USA.  
(303) 447-0816, FAX (303) 447-2825.

## Tap into the Brews

Each month, the Rocky Mountain Brews brings you the latest beer news from Colorado, New Mexico, Arizona, Idaho, Montana and Wyoming.

### Microbreweries

- Who's opening
- Who's closing
- Who's expanding
- Profiles
- New Beers
- Events

### Homebrewing

- Recipes
- New books
- Equipment tips
- Contest results

### Plus

- Cooking with beer
- Guide to breweries, pubs, liquor stores

Subscribe today: Only \$12 for 12 issues

*Rocky Mountain Brews*

2000 Whiterock Court • Fort Collins, CO 80526 • (303) 493-3387



degrees C) and then 158 degrees F (70 degrees C)—the same steps that the decoct undergoes in the boiling kettle. After the last rest is achieved, the mash is held until an iodine test indicates that no starch remains.

The tun has a false bottom made from slotted stainless steel. The wort is recirculated from underneath the bottom back on top of the malt until it runs clear. The clarity is checked at the grant, which provides the control

to direct the wort back to the lautertun or on to the kettle.

During the long boil, a tremendous amount of liquid is evaporated. In order to support such a loss, a great deal of wort must be collected. This might cause concern, because the pH will rise as sparging progresses—usually. However, because the water is so soft and unbuffered, even a small amount of wort can maintain a low pH.

## Boiling

The boil lasts four hours. This sterilizes the wort, converts the alpha acids to their isomerized counterparts and precipitates excess proteins and tannins. Of course, these are things that any brewer hopes to achieve during more moderate boiling. It also concentrates and, to some extent, caramelizes the wort, adding nuances of flavor and aroma.

The hops used are Saaz and flowers only, not pellets or—heavens forbid—extracts. The beer is bittered at the rate of 400 g per hectoliter, which works out to roughly two and one-half ounces per five gallons. They are added in thirds, the first at the beginning of the boil, the second at the half-way point and the final third half an hour before the end. This means that most of the hops are providing bitterness, with only a small amount contributing to flavor and aroma. And, with such a long boil, the maximum possible isomerization occurs, so this is an extremely high hopping rate.

The long boil and high physical quantities of hops help to remove the large proteins that otherwise enhance staling in the finished beer. The boil physically pushes these proteins into each other and into the tannins, accreting big flocs that fall out as hot break.

## Cooling

Once the boil is complete, the wort is pumped next door to the coolship room. Coolships are large, shallow pans. Pilsner Urquell has a building dedicated to them. There are two huge pans, no more than half a meter deep. There are large louvered windows on one long wall, and when the wort is cooling a great deal of steam is given off, which escapes through the louvers.

While in the coolships, the beer loses a lot of trub through settling. It also gains 8 to 10 ppm oxygen, which will be required for the proper growth of the yeast. The bittered wort is allowed to cool from 206 degrees F (95 degrees C) down to 122 to 140 degrees F (50 to 60 degrees C) over the course of four hours.

This is just the point where other invading organisms might start to get

a foothold in the wort, so it is pumped from the coolships through a plate and frame counterflow cooler to bring it down to the pitching temperature of 41 degrees F (5 degrees C). From this point the beer goes underground, where Pilsner Urquell has miles of underground tunnels. It's quite eerie in those cold, cold tunnels, where it always rains.

### Yeast

As brewers we know how important yeast is. It is the "ingredient" that can most quickly go bad. Pilsner Urquell, dating back as it does to before the dawn of true understanding of yeast, has developed a robust system for handling yeast that does not rely on modern equipment.

Pilsner Urquell uses 0.4 L of yeast slurry for each hectoliter of beer. (This is equivalent to pitching about two ounces of yeast paste in a five-gallon batch—and this is why homebrewers ought to make a starter for liquid yeast products!) The yeast doubles three to four times during fermentation. The yeast is grown in a laboratory and then brought up to pitching quantities. It ferments the beer and is then collected from the primary fermenter. After use in five beers it is discarded. This approach limits the amount of contaminating organisms that can grow in the beer. Because the yeast never gets above about 50 degrees F (10 degrees C), invaders grow very slowly indeed.

Between fermentations the harvested yeast is cleaned. It is first brought into cooled, open-top steel tanks that look like sinks, where distilled water is added and the slurry is vibrated. This separates it into layers, and the yeast layer is brought into a holding pot.

The holding pots—they look like witches' cauldrons—are mounted by two arms to the walls of the yeast room, and they can be tilted with a handle on the side. The yeast is held here for one or two days and washed three times. The washing procedure begins by adding water to the pot and using a wooden rake to stir it up for a minute or two. Eventually, the

healthy yeast will settle to the bottom and the lighter material—dead cells, bacteria—stay in suspension. Then the pot is tilted and out goes the bath water.

What is fascinating about the yeast used at Pilsner Urquell is that they actually have three strains. Rous told me they are very similar and are used to check for mutations. He believes he can detect differences between them, but they are very subtle. Having been in charge of fermentation, I think he should know.

The different strains are kept separate during the growing and fermentation phases. They are grouped by strain in the yeast room pots. This is different from English breweries

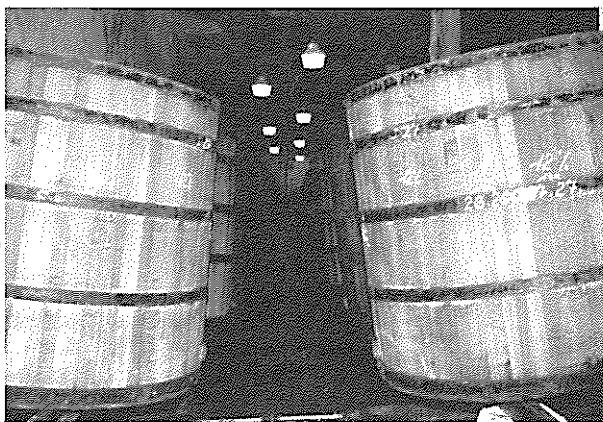


Photo courtesy CMAA-England

**Primary fermentation in oak barrels.**

that use combination strains of yeast, like Whitbread, where the proper fermentation depends upon the orchestrated properties of each.

The truly clever aspect of this approach is that changes in the yeast or the overgrowth of some contaminant can be detected very quickly with just a tasting. Although you might say that by the time you can taste the difference, a whole batch is ruined, you'd be wrong. At that point, only one-third of a batch is off. With sensitive tasters, the contamination can be detected at the threshold level. When diluted by the other two-thirds, this puts the contaminant well under the threshold. Of course, at this point you package your beer and throw out the offending yeast and start again. So it can be seen that with a minimum of equipment and simple procedures, a pure beer of exceptionally high quality can be maintained.

### Primary Fermentation

After brewing, the contents of as many as 16 separate batches of wort are cooled and combined. They are sent to the primary fermentation rooms, where they are again split up. Half of the primary fermentation is carried out in stainless-steel tanks that resemble shortened bath tubs. The other half resides in traditional oak barrels. All are open fermenters. The two portions of the primary are each split into three for the different yeast strains.

Pilsner Urquell has 60,000 hl of primary space, from 1,100 wood tanks of 28 hl volume and 200 steel tanks of 150 to 160 hl. All of the fermentation areas are kept refrigerated to 41 degrees F (5 degrees C), with salt water lines. The steel tanks have cold water cooling as well, which can be adjusted manually.

The wooden tanks are not raw inside. They are coated with "brewer's pitch," which is a compound made from, among other things, asphalt. It has a butterscotch or caramel color and texture. This is applied by melting the pitch and pouring it into the barrel, then rolling the barrel around until the inside is coated.

During the primary fermentation, the beer goes from 12° Plato to 4.8 to 5° Plato over 12 days. The temperature rises by about 2 degrees F (1 degree C) per day to a peak of around 48 degrees F (9 degrees C), then falls back to about 43 degrees F (6 degrees C).

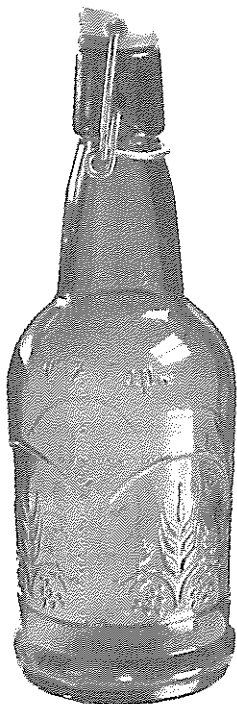
### Lagering

Once the primary fermentation subsides, the beer is reunited. The married (remarried?) beer is then racked into barrels for lagering. These closed barrels, once filled, are then lowered into the 9 km of underground tunnels for 60 days of cold storage.

The use of tunnels for lagering goes far back in time. The earth acts as an insulator, and the temperature does not change from season to season. The tunnels are refrigerated to 34 degrees F (1 degree C).

Because the tunnels are effectively

**An idea  
whose time  
has come...**



**...again.**

The E.Z. Cap bottle recalls the old saying "If it ain't broke, don't fix it."

Now, the idea of a simple, attached and resealable cap is more attractive than ever in combination with a traditionally styled 16 oz. amber bottle for the home brewer. The E.Z. Cap bottle is a top quality North American product designed to enhance your pride in the brew it contains.

Contact your local brewing supply dealer for further information.

**ez  
cap**

E.Z. Cap Bottle Distributors  
4224 Chippewa Road N.W.  
Calgary, Alberta, Canada T2L 1A3

**(403) 282-5972**  
Phone/FAX

sealed from the outside, water vapor condenses on the ceiling and walls. This results in a perpetual rain and a mist that blots out the sound and visual details of each tunnel. Once you get off a main tunnel, it is very quiet and cold. With Rous as my guide, I did not worry, but the thought passed that, lost in these tunnels, I might be fodder for some twisted Jack London story.

The walls are cut from the rock and whitewashed, but the rails in the floor really give one the feeling of being in a beer mine. The tunnels are lit with bare bulbs, and they branch off in all directions. Looking down the side tunnels as I passed by, some seemed to be main corridors, but most were short cul-de-sacs—stacked to the ceiling with barrels. It seemed hard to imagine workers rolling the full barrels in, and heaving them up into position—then, two months later, taking them down again.

### Packaging and Distribution

After two months in solitary, the beer is removed to the surface for bottling and kegging. Sixty percent of the beer goes into kegs. Pilsner Urquell has just invested in a new kegging line that can clean, fill and check a keg a minute.

The cleaning cycle includes an acid wash (nitric or sulfuric) followed by caustic, then two water washes and a drying cycle. Fill levels in kegs are checked with a gamma ray device.

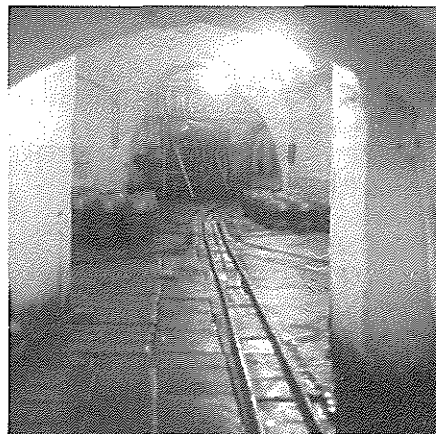
The beer for bottling is filtered. After filling and capping, the bottles are heated in a water bath to pasteurize the beer. Shelf life for bottles must be at least six months, so pasteurization is mandatory. Pilsner Urquell is not exported to this country in kegs because the shelf life is not long enough. They are investigating ways to do this—let us pray for that day!

### The People

Although Pilsner Urquell is an

institution, it is the people who work there as well. As American industry has shown so well by bad example, when the people don't care about their work the quality suffers. That is clearly not the case here.

Pilsner Urquell employs about 500 people, of which 150 are women, most of whom work in the packaging area. The brewery runs all the time, with the brew house, cooling and fermentation running three shifts, one shift in the tunnels and two or three shifts in packaging.



**Underground lagering tunnels**

Photo by the author

Although great upheaval is going on all around them, where many social institutions are falling and shortages of basic necessities are creating tension and strikes, there has never been a strike at the brewery. The employees seemed happy and busy to my casual eye. Per-

haps it is the free beer they get, but I don't think so—the consumption is similar to what other breweries experience. The packaging crew even has its own band. I envision a cross-cultural exchange where the Anchor and Pilsner Urquell bands get together for a concert!

There are two restaurants on the grounds. The one Rous took me to is beautifully adorned and kept, full of rich wood, glazed tiles and stained glass, and serving perhaps the finest beer on earth. Here I learned the Czech equivalent of "Cheers": *Nas Dravi!* 🍻

Darryl Richman has been brewing for six years, with time out to check up on what others are doing. He is proud to be a member and newsletter editor of the world's oldest homebrew club—the Maltose Falcons. After his day job as a techno-weenie and running his garage brewery (*Ye Olde Craftie Foxxe or Der Schlaue Fuchs Altbrauerei*, depending on the style), little time is left for his wife.



# Beginner's Luck

**A**t every BURP meeting I've attended (not many), the basic experience seems to be (besides brew-tasting) that brewers of all levels ask each other how they go about brewing, what results they get and what they would do differently next time.

This article documents my evolution as a beginning brewer trying to improve my brew. This attempt may demonstrate more than an acceptable level of chutzpah on my part, but it did occur to me that the hoary ancients whose advice normally fills these pages may very well have forgotten their early experiments, shrouded as they are in the mists of time.

I brewed my first batch August 1989, making me a "new brewer." The changes in my technique are fresh in my mind, but I've made enough batches to see what has helped and what hasn't. I've got 23 batches under my belt (literally) now, and have seen steady improvement in my brew (along with two abject failures).

Like most new brewers nowadays, before setting can opener to extract I bought Charlie Papazian's *The Complete Joy of Home Brewing* and wore the sections on beginning brewing to tatters. Before starting my first batch I made three decisions: (1) to brew entirely with malt extract—no sugar (2) use a glass carboy for a fermenter and (3) keg the beer rather than bottle it.

Decision number 3 was made before I decided to even think seriously about brewing. Acquiring a spare refrigerator made kegging a possibility and kegging made brewing a possi-

bility—my sloth level will not permit the trouble of bottling!

Decision number 1 was made because I took Papazian at his word. He said that every reduction of sugar "jacking" results in better beer, so (except for priming) I reduced sugar all the way to zero.

Decision number 2 was made for sanitation reasons. I believe that glass is capable of more thorough sanitation than soft plastic, and I believe that the tiny hole in the top of a carboy will admit fewer of the little bad guys when the fermenter must be opened (siphoning, hydrometer sampling) than the yawning gape of a plastic fermenter with the lid off. So far, my failures have not resulted from contamination, so I'll stick with glass.

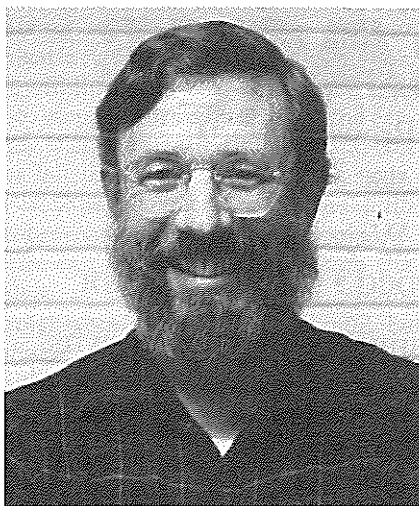
Batch number 1 was just hopped extract, water and dried yeast. While I was exceedingly proud of its

drinkability, it was lacking in body and did not produce a very good head. Specialty grains have rectified that.

With batch number two, I decided to jump into specialty grains, brewing a stout recipe (Toad Spit Stout) from Papazian's book. According to him, this made me an "intermediate brewer," but I don't believe his flattery. The stout turned out well and specialty grains became a permanent part of my repertoire, particularly crystal malt, some of which goes into just about everything I brew.

Because I was experimenting, for the next 10 batches or so I used a rolling pin to crush the grains. Most of my brewing has been attended by a sort of sublime calm as the heat or the yeast does its work, but in crushing the grain, the language which emanated from the kitchen tended to blister wallpaper and unsettle my wife. I have since invested in a grain mill that has not only saved the wallpaper and my marriage, but has attracted brewing friends who "just happen" to show up with a few pounds of uncrushed grain.

A couple of batches later came the next great discovery—Wyeast liquid yeast. This had the disadvantage of making my brewing more expensive. However, in my opinion the advantages outweigh the expense. Using dry yeast, my beer was tasting "yeasty" and "homebrewish." ("Homebrewish" is no longer a pejorative—but by it I mean the *really* untutored efforts I tasted when I was in college back in the 1950s). The Wyeast definitely produced a cleaner brew, and there was another unforeseen advantage—the availability of



ROB BROOKE

different yeast strains. I didn't know it at the time, but I now believe that nothing (except perhaps the hops) so affects the character of a beer as the yeast strain. With dry yeast, you just don't have the best to work with.

My next adaptation came as the result of *zymurgy*, (Fall 1989, Vol. 12, No. 3) in an article on an el cheapo faucet-mounted charcoal filter. The filter, it said, would remove the chlorine and other assorted odds and ends

from my water. I bought a Water-Pik Instapure filter (\$20-ish) and mounted it on the brewery (kitchen) faucet. Of all the changes I've made, this one has resulted in the least detectable change in the quality of my brew. But it isn't hurting any, so, like crossed fingers, religion and good-luck charms, I filter all my water.

Also during my "water period" I got an analysis of my city water from the treatment plant. This allowed me

to correct the amounts of gypsum I should add and to look askance at such recipes as "Toad Spit Stout," which asked for *eight* teaspoons of gypsum and resulted in a somewhat harsh brew.

Serendipity yielded the next change in process. My friend Buddy Koolhof has been brewing with bottled water that, whether by accident or design, he kept in the refrigerator. On a visit during one of his brewing sessions I noticed that after adding hot wort to the prechilled water in the fermenter the mixture was almost cool enough to pitch the yeast. I had been accustomed to waiting *hours* for my wort to cool enough to pitch. "Bingo," said the little birdy, "whatever is getting a good start in the wort during those cool-down hours, it isn't the yeast you so carefully selected." So now I always prechill the water that's going into the fermenter as close to freezing as possible without making ice. This shortens the cool-down by many hours.

This revelation was followed in short order by the 1989 Special Yeast *zymurgy* (Vol. 12, No. 4) with articles recommending high pitch rates of *active* yeast. Because I was already using liquid yeast, rehydration was not an issue, but I resolved to jump-start the Wyeast in small amounts of sterile wort. Now, every six batches of beer I can (the way Grandma used to can vegetables) six one-pint canning jars of wort, each containing about a cup and a half of wort. I make up the wort by boiling one pound of light dry malt extract in 10 cups of water and canning the stuff according to classic canning directions, processing for 20 minutes. The resulting jars of wort are sealed and sterile and will keep indefinitely.

My brewing timetable typically is: punch a Wyeast packet to break the inner seal in the evening two to three days before brew day. The packet will usually be bloated and active by sometime the next day. I open a room-temperature jar of sterile wort and pitch the Wyeast once it is well bloated, then screw the two-piece canning lid back on loosely enough to allow pressure relief. I allow the starter to "work" for 36 or more hours, planning my brewing to be finished at that time. When pitched, the cup and a half of starter



**The Filter Store Plus**

**W**ouldn't you like your beer free of bacteria, yeast sediment and chill haze?

**The Filter Store Plus** has a complete line of plastic housings and accessories plus high efficiency elements 0.5 micron efficient at 99.97%

For a free catalog and any technical questions call us at 1-800-828-1494  
P.O. Box 425, Rush N.Y. 14543

## MALT EXTRACTS

**High Quality Brewers Wort:**  
Packaged in easy to use 3.3# poly bags.

Golden • Dark • Weizen • Amber  
Hopped and Unhopped • Caramel Color

**Crowns:** We sell any quantity of in-stock crowns. Twist off, plain gold and a wide variety of soft drink flavors. Decorating with your design is available.

800-236-5544

**Northwestern  
Extract Co.**

3590 North 126th Street, Brookfield, WI 53005

# Quality Homebrew!

We are happy to be supplying over 3000 homebrewers in all fifty states plus our customers in the U. S. military overseas!

Sam and JoAnn Wammack started *The Home Brewery* six years ago in Southern California. Now they are in the Missouri Ozarks, and *The Home Brewery* has grown to 3 locations. We're still trying hard to be the country's best supplier.

Check out what we have to offer; and let's see if we can help you with this *FUN* hobby of homebrewing!



*23 varieties of Hops, with Alpha analysis . . . . . 15 types of Grain, free crushing  
130 kinds of Malt Extract . . . . . 13 strains of Liquid Yeast Cultures  
A Complete Selection of Homebrewing Equipment . . . . Fast, Personal Service*

**FREE 28-page Catalog - 1-800-321-BREW**

*Sponsors of  
The Inland Empire Brewers  
Homebrewing Club  
(300+ members)*

**The Home Brewery** locations are:  
Ozark, Missouri . . . . . Sam & JoAnn Wammack  
San Bernardino, California . . Simon & Donna Chambers  
Las Vegas, Nevada . . . . . Frank & Robin Danesi

is quite active with a good head of foam and plenty of bubbling action. The result of this not-very-difficult process is that I get a good cover of foam and a healthy start on yeast activity within hours, not days, from the time I pitch.

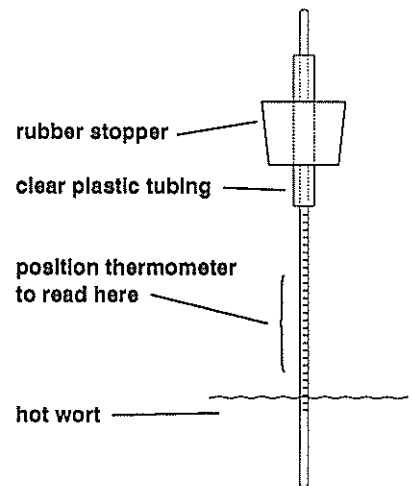
Thinking longer about the cool-down period and pitching led me to other considerations. The book says to pitch when the wort temperature is in the 70s. My wort, after adding the "boil" to the prechilled water in the fermenter, was hitting about 85 degrees F (29.5 degrees C). "What's the difference," I asked myself, "whether I pitch at 82 degrees or 75 degrees F (28 or 24 degrees C)?"

"Temperature shock!" I answered. Yeast can live and thrive at 82 degrees F (28 degrees C), but you don't want to dump a culture that has been happy at 65 degrees (or whatever) into a wort at 82 degrees. What to do? My goal was to shorten the unpitched cool-down period as much as possible, but I didn't want to shock the yeast. The technique I have evolved is to cool the wort as rapidly as possible. That means that, in winter, I put the car-

boy outside to be cooled by the natural cold. In the more temperate seasons, I plunk the cooling carboy into my deep-freeze. I can usually get the temperature of the wort down into the low eighties within 30 to 40 minutes.

I should mention a trick that using a glass carboy allows. I use a sanitized, long glass thermometer to measure the wort temperature. By fitting a half-inch section of clear plastic tubing onto the thermometer, it will fit tightly into the pierced rubber stopper normally used on the carboy with a fermentation lock and can be left in place while the wort cools. Positioned correctly with the bulb submerged in the wort, the temperature can be read easily through the glass of the carboy as the cooling progresses. The carboy should be shaken every 15 minutes or so during cooling to mix the cooler and warmer portions of the wort.

During this cooling delay I place the canning jar containing the foaming starter in a tepid water bath to bring its temperature gradually up to the temperature of the cooling wort. I even calibrated my fingers. I discov-



ered that when the water temperature first started feeling faintly warm to my fingers, it was about 85 degrees F (29.5 degrees C). Now when I draw water to "condition" a starter prior to pitching, my fingers tell me when the temperature is right. It saves a lot of fumbling with the thermometer.

That's about it to date. I'm still not satisfied with the clarity of my beer, so I'm experimenting with fining agents. I have also been tweaking my recipes, trying to get the strength

and the bittering right. I am striving to get a more assertive aroma from my finishing hops. I am not far enough along in these experiments to share anything definitive, but it is becoming apparent that, where hops are concerned, fresh is good. Old, tired hops that have been in the freezer (or on the shelf) too long do not make as lively a brew as the fresh stuff.

Green is the answer, I think. If the hops, either pellets or whole, are

not a vivid green, they may be over the hill. I am fortunate to have a local supplier who turns over the stock fast enough that the hops are always green, fragrant and obviously fresh. One mail-order I tried resulted in pellets that were a sort of dun-brown color without much fragrance. The beer made from those hops was bitter enough, but not outstanding in either flavor or aroma.

I'm beginning to reach the end of

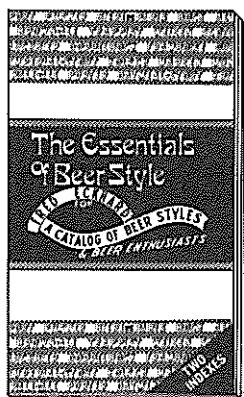
my "brewer's biography." Dealing with other brewers in my club and sampling their brews has led me to what I think is an eternal truth. Ultimately in the search for brewing excellence, brewers must first satisfy themselves. If that satisfaction leads to a brew acceptable to the world at large, brewers had better educate their palates. As a new brewer, I had not experienced the "pipeline syndrome"; if you want an unending supply of brew, you have to brew batch number two long before batch number one has passed the glottis!

As might have been expected, batch number one reached fruition and batch number two wasn't even a gleam in my eye. I used the hiatus to buy and sample single bottles of every good brew, ale or lager, to make notes of all my swilling. The notes are not of much use to posterity, but they helped me concentrate on what I was tasting and how I liked it. Subsequent tastings of the same brews have led to some revisions in my opinions, but the important thing to my brewing is that I have established some sort of target to shoot for. When I miss the target, I can have some estimate of what I should revise, and when I hit pretty close I know that the record will help me repeat it in the future.

I'll leave with my capsule brewing philosophy: to make the best beer I can with the minimum outlay of capital and time. That means I'll probably never mash, never bottle and probably never buy an expensive chiller or filter. But any small extra effort I can make that results in an improved brew—that I'll do!

Rob Brooke, born in 1935, lives in Rockville, Md., a northern suburb of Washington, D.C. He is married with two grown daughters and has worked as a computer programmer for 25 years with IBM. His extra-curricular interests are sailing in the Chesapeake Bay and the Atlantic Ocean, piloting ultralights, building harp-sichords, playing music and homebrewing.

*Preceding is the author's revision of an article that appeared in the May 1990 BURP News, newsletter of the Brewers United for Real Potables in Derwood, Md.*



*The Essentials of Beer Style* is an ideal handbook for the serious beer enthusiast, and an unparalleled source of hard-to-find information about the process of brewing the world's great beers. It is an indispensable reference tool for small brewers, home brewers, and beer importers and distributors in their search for information on rare or obscure beer types.

For those who want to know more about beer tasting, the final third of the book is a full and complete handbook on that subject—a gold mine of information for aspiring beer judges.



*The Essentials of Beer Style: A Catalog of Classic Beer Styles for Brewers & Beer Enthusiasts*, Fred Eckhardt, 224 pages. At your favorite homebrew supply shop or order direct from Fred Eckhardt Communications, P.O. Box 546, Portland OR 97207. \$14.95, plus \$2.00 shipping. Wholesale inquiries invited.

**KELLER'S  
BREWHOUSE**  
*You Deserve The Best.  
We've Got It!*

**Quality Home Brewing  
Equipment & Supplies**



★ **FREE CATALOG - TOLL FREE ORDER LINE!** ★

☎ **1-800-888-7287** ☎

★ **No Precalculated Shipping Rates!** ★

★ **Bulk Order Discounts..... Fast Mail Order Service** ★

☎ Advice • (405) 721-0508 • Local ☎

**8313 N.W. 113TH ST. • OKLAHOMA CITY, OK. 73162**

**Kent Keller - Proprietor**

# Counterpressure Transfer

## *Rack Your Beer Without Losing the Fizz*

**K**egging your homebrew is a worthwhile technique. It's wonderful to arrive home after work and draw off a pint of creamy stout from a faucet in the kitchen, or to take a keg of your best kiwifruit-mango ale to a party and introduce non-brewers to your hobby.

One of the small annoyances of kegging, though, is sediment. Few people want to invest the time and money necessary to filter their homebrew, and many (me included) lack extra refrigerator or freezer space in which to chill kegs down for artificial carbonation. Therefore, we're stuck with natural carbonation. It works fine, but produces a healthy layer of sediment in the keg. Moving a full keg more than a few feet stirs up clouds of sediment that take a day or two to settle. Drawing off a pint before moving helps some, but a good jostle in the car on the way to a party will still make a crystal-clear Vienna lager look like a soupy orange milkshake.

### A Simple Solution

Moving your beer off its sediment to another keg via counterpressure is

---

DAN FINK  
Staff Writer

---

a quick, easy solution. The beer's carbonation level remains intact, and the receiving keg is ready to move with no sediment. In addition, the technique can come in

handy for transferring homebrew or even commercial beer from awkward half-barrel kegs into soda kegs for easy carrying (or for limiting consumption!). It's a snap to fill a friend's keg with a sample of your brew, and no quality will be lost in the process. Finally, if you ferment (either primary or secondary) in soda kegs, the transfer technique will allow you to rack to an aging or conditioning tank without lifting kegs and with no risk of oxidation.

### Principles

The process is quite simple. The empty receiving keg is flushed of air and filled with CO<sub>2</sub> at the same pressure as the beer. CO<sub>2</sub> pressure then pushes the beer out of the keg and off the sediment, and because transfer pressure is set higher than the natural pressure in the beer, no carbonation is lost. As pressure in the receiving keg increases from the incoming beer, the excess gas is vented



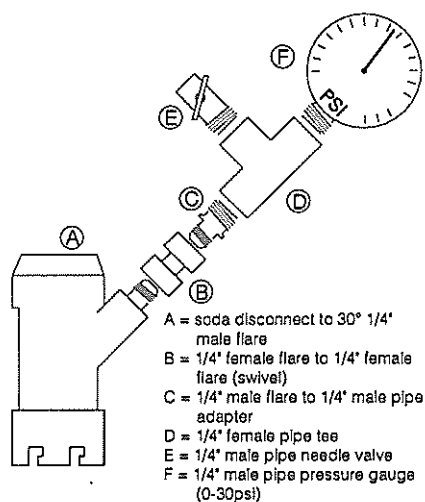
through a bleed valve. The dip tube on the originating keg is capped to avoid sediment intake, and the beer flows down the dip tube of the receiving keg to avoid foaming.

### How to Build It

The only accessory you'll need to build is a keg pressure gauge with a bleed valve (see Illustration 1, next page). The pressure gauge is available from any beer or soda keg supplier, and everything else is from the hardware store. Total cost is less than \$15. When constructing the device, the only trick is to seal all threads with Teflon tape or pipe thread compound. Simply apply to the threads and screw everything together. The device is handy all through the kegging process, allowing you to check and adjust keg pressures quickly and easily.

Capping the dip tube of the conditioning keg ensures that no sediment will be transferred to the receiving





**Illustration 1. Pressure gauge/bleeder**

keg. It's not mandatory, but your beer will be clearer if you do it. Cutting an inch off the end of tube also works, but then you'll waste beer the next time you dispense with that tube. To make the cap, simply fit a copper end cap onto a one-inch piece of half-inch diameter copper tube, and cut two notches crosswise on the end of the dip tube to prevent the cap from being sucked toward the end of the tube and blocking the outflow of beer. Slip the cap over the end of the dip tube before filling the conditioning keg with beer.

The only remaining step is to as-

semble a jumper tube. It should have liquid-line disconnects on both ends.

### Preparing to Transfer

In preparing to transfer beer, sanitize your receiving keg and all of its parts, plus your jumper tube assembly. Rinse well, then reattach all keg parts and tighten down. Your full keg of carbonated beer should already have an end cap on the dip tube, but don't panic if you forgot that step last week when you filled it—you'll still leave a majority of the sediment behind.

Now, remove the air from your sanitized receiving keg. Set your regulator at about 10 psi and attach the gas hose to the *liquid out* side of the keg, then attach your new gauge assembly to the gas side. Pressurize the keg, then turn off the gas and vent the keg with the bleed valve. Repeat this four or five times and your keg will have a nearly pure CO<sub>2</sub> atmosphere inside.

Take a pressure reading on your full keg of beer with your gauge assembly. At 60 degrees F, most keg beers will be around 15 to 20 psi (2 to 2.25 volumes of CO<sub>2</sub>), though at higher temperatures your pressure will be higher, too. Set your regulator at five to 10 psi *more* than this reading (so if your beer keg read 20 psi,

you'd set your regulator at 25 psi). If this requires you to exceed 40 psi or so, play it safe and reduce your regulator pressure down to 30 or wait until later and cool the keg down more. If your pressure is that high, you most likely overprimed, and the slight loss of carbonation during transfer will reduce foaming during transfer and dispensing.

If you are transferring *un*-carbonated beer from a fermenter, the beer's natural pressure is zero, so just set the regulator at five to 10 psi. In any case, transferring at more than 10 psi over the natural level can cause excessive foaming, and I recommend against it unless you want foam spraying all over the room out of your bleed valve.

### Let's Do It!

It's time to transfer. Pressurize your receiving keg to the level you just set on your regulator, then do the same to the full keg of beer. Attach your pressure gauge to the receiving keg, and connect your jumper tube between the liquid outputs of the two kegs. Notice that almost no beer moves anywhere. That's because the pressure in the two kegs is equal. Crack open the bleeder valve and release gas until the receiving keg pressure is the same as (but *not* below) the pressure reading you got from the beer keg (if your reading was 20 psi and you set your transfer pressure at 25 psi, don't let the pressure in the receiving keg drop below 20 psi or you'll lose some carbonation).

As the beer flows, you'll have to twiddle with the bleeder valve to keep the flow going. As beer enters the receiving keg, the pressure in it will rise, and as it approaches the pressure set on the regulator, the flow will slow and eventually stop. With practice, you'll find a setting on the bleed valve that keeps the transfer steady and allows you to do other things while the transfer takes place. Just don't allow it to drop below the natural pressure in the beer.

When the transfer is complete, shut everything off and clean your equipment. Your sediment-free, perfectly carbonated beer is ready for the party, so load it up and have a good time!

## "TODAY'S HOMEBREWER ... TOMORROW'S PUB BREWER!"

At NEWLANDS SERVICES INC. we know that a lot of North America's finest Brewers and Brewpub owners came from "modest beginnings" - usually the BASEMENT and BATHTUB starts! NEWLAND'S U.S. Consultant, RUSSELL SCHEHRER, an award winning homebrewer and now owner/Brewmaster of the WYNKOOP BREWING CO. in Denver is a perfect example of a "modest beginning."

When you're ready to take that NEXT step - or are even considering the possibility ... call us first. Let NEWLANDS experience assist you.

# NEWLANDS SERVICES INC.

Contact BRAD McQUHAE, Director, Brewing Services

PH: 1 (604) 384-4742 • FAX: 1 (604) 381-3506

Associated with: PREMIER RESTAURANT EQUIPMENT CO., MINNEAPOLIS, MIN. • U.S.A.

# FOR THE BEGINNER

RUSTY McCRADY

## From Haze to Clarity: Defining the Fining Agents

*Fillet of a fenny snake.  
In the cauldron boil and bake;  
Eye of newt, and toe of frog,  
Wool of bat, and tongue of dog...*

—William Shakespeare  
(*Macbeth*, Act IV, Scene 1)

**F**ortunately no brewmaster ever tried anything so nasty as these witches' suggestions, but would you believe fish innards, seaweed, clay, powdered plastic and wood chips? In fact, brewers both professional and amateur have added some pretty strange things to their cauldrons to turn that cloudy wort into clear beer.

As Dave Miller points out in the *Complete Handbook of Home Brewing*, while the most common cause of cloudiness in homemade beer—chill haze—is a natural result of brewing and has no effect on taste, “it drives him (and many of us otherwise successful brewers) up the wall.” So it makes sense for all of us to get familiar with the arsenal of weapons we have at our disposal that will reduce, if not completely eliminate, this and similar phenomena that keep our beers and ales from looking as perfect as the ones we see on TV ads.

Some “fining” or clarifying agents are extremely easy to use; others are so tricky and difficult that I must question their practicality. Therefore, the menu presented here will run from the easiest and most practical to the most difficult, although I’m certain you’ll agree that many of the substances, including the most widely

used, fall into the “strange” category.

One clarifier that I have no hesitation about recommending is the curiously named “Irish moss,” which is dried brown seaweed. It is available in powdered, flaked and whole form. Powder is the most common, and you should crush larger chunks before adding the moss to make sure your measurements are accurate. Irish moss is often referred to in Great Britain as “copper finings” because it is always added to the traditionally copper brewing kettle during the boil.

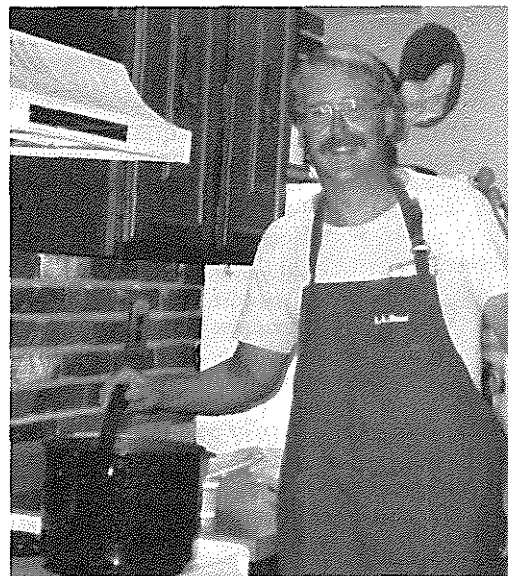
Only one-half teaspoon of powdered Irish moss is needed per five-gallon batch. It’s added before the last 20 minutes of the boil and later strained out along with the spent hops, if hops too have been added. Increasing the amount of Irish moss or the boiling time will not give you clearer beer! Boiling the moss more than 20 minutes will degrade its effectiveness, and using more than the recommended amount can cause a slimy gel in the brew kettle and possibly in your fermenter.

How does it work? You might want to know before you go adding seaweed to your beer! As a matter of fact it works quite well, according to Gordon Allen-Wardell, an amateur brewer and apiculture professor at the University of Maryland. As he explains it, “the negatively charged starch polymers in the Irish moss attract the positively charged protein chains in the boiling wort and

sink them to the bottom of the kettle.” Chill haze is caused by suspended proteins in beer, therefore the less protein left in suspension the better.

To dispel some of the mystery behind the use of the various substances catalogued here, I spoke with another scientist, Wendy Aaronson of Brew Masters Homebrew Shop in Rockville, Md., whose day job is working as a microbiologist for the Food and Drug Administration. Aaronson explains that “A lot of the actions of fining agents in brew preparation are based on positive-negative attractions. They work like magnets, helping to attract, and then they settle out proteins and yeast.”

If we’re working with magnets, it might be wise to use a positively charged one to go along with the nega-



tively charged one we have in Irish moss. Indeed we have our choice between two: isinglass and common household gelatin, both of which attract negatively charged proteins and yeast, according to Allen-Wardell. Gelatin is the easier of the two to prepare. One-half teaspoon is dissolved in four to six ounces of water which is heated (but not boiled) and then added to the beer just after the gelatin dissolves (at racking or bottling

time).

Isinglass, on the other hand, is less easily dissolved. Charlie Papazian in *The Complete Joy of Home Brewing* recommends preparing it in a weak acid solution before adding it to the beer just before racking or bottling. Very dilute lemon juice—one-half teaspoon per six ounces of water with one-half teaspoon of isinglass will clear a five-gallon batch.

You may have heard that isinglass

comes from the swim bladder of a sturgeon, and this is true. (After all, caviar is a delicacy, so why not?) How the shredded swim bladder of a large fish came to be used to clarify beer was a mystery to me until explained by Steve Pards, brewmaster at the British Brewing Co. in Glen Burnie, Md., and graduate of Edinburgh University, Scotland. It seems the ancient Scots used the swim bladders of the largest fish they could find—sturgeon—to carry beer around with them (same idea as a wine skin). Sure enough, they noticed that the beer thus packaged was clearer than that kept in barrels.

Amazing how some great ideas originate. Now if we only knew who first got the idea of dumping seaweed into beer.

Another substance that clears protein from beer also has origins in the ancient practices of an island people, in this case the Polynesians. The substance is papain, also used in meat tenderizers, an enzyme from the fruit and leaves of the papaya plant. Allen-Wardell explains that papain breaks down protein in beer. He said "In the tropics, Polynesians wrap meat in papaya leaves and bang it with a mallet. I've seen this done from Indonesia to Fiji."

Papain is temperature sensitive, and should be added to the wort or fermenting beer at room temperature. It is not nearly as available as the above fining agents, nor is it as commonly used.

Two additional agents that are used specifically to combat chill haze are Polyclar and bentonite. The former is a powdered plastic and the latter is derived from clay—in fact, it is named for Fort Benton, Mont., where the clay was originally found.

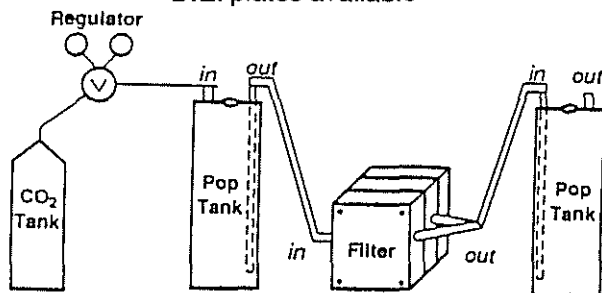
For Polyclar, the normal dosage is one-quarter to one-third ounce per five gallons of beer, though up to one-quarter cup can be used with extremely hazy brews. Polyclar does not affect head retention or mouth feel, and will actually remove any browning that may have occurred from oxidation.

When using bentonite alone or in combination with Polyclar, Dave Miller suggests adding two ounces of bentonite to three cups of just-boiled water and forming a slurry in the

## MARCON FILTERS

produces Beer Filters for homebrewers, pilot breweries, microbreweries, and pub breweries, etc.

All models can use pads or reusable membranes  
D.E. plates available



For Draft Beer we have the economical "Carosello Pressurized System"

**MARCON FILTERS**

40 Beverly Hills Drive, Downsview, Ontario, Canada M31 1A1, Phone (416) 248-8484



## URBAN TECHNOLOGY

2911 W Wilshire Oklahoma City OK. 73116

### Brewing Equipment and Supplies

Urban Technology offers quality products at affordable prices for the advanced or novice homebrewer. We welcome you to visit our showroom where you will also find a complete line of organic and hydroponic gardening supplies for the indoor and outdoor gardener.



Ask about  
our monthly  
specials!

- ☐ 60 Malt Extracts
- ☐ 12 Different Grains
- ☐ Fresh Hops
- ☐ Hop Pellets
- ☐ Liquid and Dry Yeast
- ☐ Equipment and Supplies
- ☐ Orders shipped in 24 Hrs.

Visa, Mastercard and C.O.D.'s  
welcome!



Retail Store Hrs.  
M-F. 9am - 6pm  
Sat. 9am - 3pm

**Free Catalog! 1-800-356-3771 or 1-405-843-1888**

blender. Polyclar, bentonite or a combination of the two should be added just after fermentation, a few days before racking or bottling.

Both materials fall to the bottom of the fermenter along with the attached protein particles and are left behind at racking. Don't overuse either clarifier—small amounts of the polyphenols they remove are essential in preventing oxidation of the finished beer. If you stick with the recommended amounts, however, you have nothing to worry about.

I might add from personal experience that aside from the fact that chill haze is largely benign, it is also temporary. Two or three weeks of refrigeration will make it disappear magically (the proteins that cause it finally settle out). Alternatively, raising the temperature of the refrigerator to around 55 to 60 degrees F (13 to 15.5 degrees C) will usually drive away the haze.

One new arrival to the finings lineup is silica gel, the same stuff that's packed with cameras to keep them dry. According to Allen Wardell, it also "absorbs" (collects) protein particles in much the same way as does good old gelatin.

And yes, you could try beechwood chips. But only if you feel like cleaning them, rinsing in very hot water, sterilizing them in your microwave oven and then repeating the process every time you use them. There's got to be an easier way, and the choices are many, as you've read in the previous paragraphs.

So there are lots of ways to clear your beer. But above all, bear in mind that there is *no substitute* for sanitation and proper procedures, and there is nothing you can use to defeat cloudiness caused by bacterial contamination or wild yeast. Be sure to do everything right from beginning to end, whether or not you use any of these clarifying agents.

Rusty McCrady is a high school teacher and homebrewer, not always in that order. He made his first brew 19 years ago from a recipe calling for Blue Ribbon malt extract and 20 pounds of cane sugar. McCrady has been brewing steadily since 1982, using much more rewarding recipes.

## St. Louis Wine & Beermaking

7352 Manchester  
Suite 100  
Maplewood, MO 63143  
Telephone: (314) 644-4664

Homebrewing and winemaking supplies and ingredients of the best possible quality at competitive prices.

Discounts on mail orders over \$30.00. Bulk malts and grains available. Case discounts.

For price list, send \$1.00 which will be credited toward your first order.

EVEN THE PROS LEAVE IT TO

# BME

THE BEST MALT EXTRACT

### BME WINNERS CIRCLE

First Place and Best of Show "BME Doppelbock"  
New York City Invitational, June 3, 1990

First Place "BME Pilsner"  
New York City Invitational, June 3, 1990

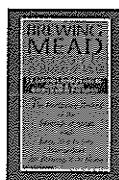
First Place "BME Weizen Doppelbock"  
Southern New England Regional, May 5, 1990

First Place "BME Dark"  
New York City Invitational, June 3, 1990

First Place "BME Pilsner"  
AHA 12th Annual National Competition, June 15, 1990

Distributed by Crosby & Baker • 999 Main Rd, PO Box 3409  
West Port, Mass. • 02790 • (508) 636-5154

## COMPLETE YOUR BREWING LIBRARY



For that  
special  
beverage.

200 pp., \$11.95  
(AHA Members \$9.95)



The classic  
text book  
on ales.

140 pp., \$11.95  
(AHA Members \$9.95)



From the  
common to  
the obscure.

186 pp., \$15.95  
(AHA Members \$15.95)



Make the  
ribbon  
winners.

196 pp., \$11.95  
(AHA Members \$9.95)

The finest books on the beverages you love best.  
Collect them all.

Brewers Publications, PO Box 287, Boulder, CO 80306-0287. (303) 447-0816,  
FAX (303) 447-2825. Add \$3.00 domestic P & H, plus \$1.00 for each additional book.

# WINNERS CIRCLE

DAN FINK



ead, that glorious elixir of the gods. Summer is the perfect time of year to start building up your stock of that wonderful, golden honey wine, especially since mead is not nearly as sensitive as beer to high fermentation temperatures. In fact, a temperature of 75 degrees F (24 degrees C) during the primary fermentation will speed things along, helping prevent stuck batches without producing fusel alcohols and other off-flavors common in beers made at higher temperatures.

Mead does take a good long time to ferment and clear, but there's a solution to that problem, too. Brew a batch a month all summer long, and by winter you'll be savoring it in front of a crackling fire as the snowflakes fall, with plenty left over for the summer to come. If you decide to attempt the prickly pear cactus mead recipe here, you'll have to wait until autumn to pick the ripe fruits, but the final product will be worth the anticipation!

The specialty and fruit beer recipes included here are quite unique, too—imagine surprising your friends on Halloween with a genuine pumpkin pie beer! All the recipes won prizes at the 1990 AHA National Competition, so you can't go wrong, no matter what you choose.

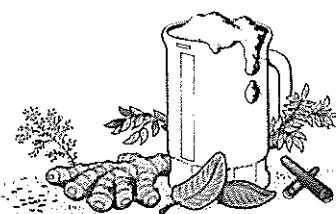
And finally, Brews Brother Jack Hagens' India pale ale is a wonderful concoction, taking first place in the 1991 Hail to Ale club competition. Be sure to try the recipe that beat out 42 other club entries from around country, each of which already had won its own local club competition. Congratulations, Jack!

## SPECIALTY BEER

**Third Place**  
**Sal Pennacchio**  
**Staten Island,**  
**New York**  
**"Punkin Ale No. 3188:**  
**Hold the Cool Whip"**

**Ingredients for 5 gallons**

4 pounds Munton and Fison lager malt



Illustrations by Martin Hess

4 pounds Munton and Fison pale malt  
2 pounds Briess six-row malt  
1/2 pound 40°L crystal malt  
1 whole pumpkin (9 pounds)  
1 teaspoon ground cinnamon  
1 teaspoon pumpkin pie spice  
2 ounces Fuggles hops (90 minutes)  
1 ounce Hallertauer hops (90 minutes)  
1/2 ounce Fuggles hops (2 minutes)  
1 teaspoons salt  
2 teaspoons gypsum  
Me.V high-temperature liquid ale yeast in a one-pint starter  
1/2 cup brown sugar to prime

- Original specific gravity: 1.065
- Terminal specific gravity: 1.016
- Boiling time: 90 minutes
- Primary fermentation: five days at 65 degrees F (18.5 degrees C) in plastic
- Secondary fermentation: 14 days at 65 degrees F (18.5 degrees C) in glass
- Age when judged (since bottling): 18 months

### Brewer's specifics

Clean and quarter the large pumpkin. Bake for about 30 minutes, strain and purée the pulp in a food processor. All grains and processed pumpkin were infusion mashed for 90 minutes at 154 degrees F (68 degrees C).

### Judges' comments

"Smells like a pumpkin pie. Nice orange pumpkin color, long-lasting head. Nice gingery flavor lingers."

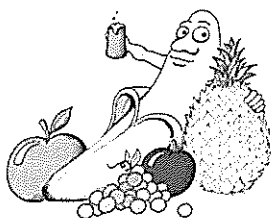
"Cinnamon up front and just a little overpowering. I get the cinnamon right on the tongue with a little pumpkin flavor. Cinnamon is a little too much. Fine job."

"Head retention like whipped cream! The balance is excellent (my personal inclination would be to lighten bitterness by 10 percent). I'm impressed. You did it! You made a truly balanced pumpkin pie beer! The Pilgrims and the Great Pumpkin would be very proud of this beer—yeah!"



## FRUIT BEER

**Second Place**  
**Jeff Andersen**  
**Santa Rosa, California**  
**"Fletcher's Ale"**



### Ingredients for 3 gallons

- 3 1/2 pounds Great Fermentations light malt extract
  - 1 pound Great Fermentations amber malt extract
  - 2 1/2 pounds mashed raspberries
  - 1/4 ounce Perle hops (40 minutes)
  - 1/4 ounce Wakatu hops (40 minutes)
  - 1/4 ounce Tettnanger hops (steeped 30 minutes)
  - Wyeast 1056 Chico liquid ale yeast
  - 1/2 cup dextrose to prime
- Original specific gravity: 1.043
  - Terminal specific gravity: 1.010
  - Boiling time: 40 minutes
  - Primary fermentation: five days at 68 degrees F (20 degrees C) in glass
  - Secondary fermentation: five days at 68 degrees F (20 degrees C) in glass
  - Age when judged (since bottling): 10 months

### Brewer's specifics

Mashed berries were added to wort for a 30-minute steep along with finishing hops. Filtered off with hops after cooling.

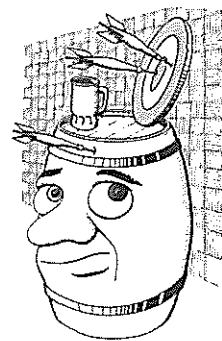
### Judges' comments

"Good color and clarity. Large bubbles, low head retention. Nice raspberry flavor! Appropriate body, just what I'd expect. Good job! Could have been a little sweeter."

"Nice bouquet, but could linger a bit longer. Raspberry fruit profile a little thin—excellent mouth feel. Very nice beer, but would like a little fuller raspberry flavor."

## 1991 HAIL TO ALE CLUB COMPETITION WINNER

**Jack Hagens**  
**North Bend,**  
**Washington**  
**Representing**  
**the Brews Brothers**  
**"India Pale Ale"**



### Ingredients for 10 gallons

- 14 pounds British malt
  - 5 pounds Klages malt
  - 3 pounds wheat malt
  - 1 pound toasted dextrin malt
  - 1 pound toasted Munich malt
  - 3 1/2 ounces Chinook hops (60 minutes)
  - 1 1/2 ounces Cascade hops (60 minutes)
  - 6 ounces Cascade hops (30 minutes)
  - 1 ounce Cascade hops (dry hopped)
  - 3 teaspoons gypsum
  - Wyeast 1028 liquid yeast in a one-quart starter
  - 3/4 cup corn sugar to prime
- Original specific gravity: 1.065
  - Terminal specific gravity: 1.015
  - Boiling time: 60 minutes
  - Primary fermentation: seven days at 60 degrees F (15.5 degrees C) in glass
  - Secondary fermentation: three and one-half weeks at 60 degrees F (15.5 degrees C) in glass, then two days at 65 degrees F (18.5 degrees C) with finings added.
  - Age when judged (since bottling): three months

### Brewer's specifics

Mashed grains in an upward step mash. First stage was at 130 degrees F (54.5 degrees C) for 1 hour. Second step at 155 degrees F (68.5 degrees C) for 2 1/2 hours. Final step was at 167 degrees F (75 degrees C) for 30 minutes.

### Judges' comments

"Fruity and estery in the aroma. Golden color and great head retention. A little bit sweet on the finish, nice hop bitterness-malt balance. Slightly salty—appropriate. Very nice hops, needs a bit more attenuation and alcohol, great example of the style!"

"Great hops! Excellent color and head retention. Great effort, hops really grab you and don't let go. Good balance, fine aftertaste. Medium body, very good for style. Could I have a case to go?"

## PORTER

Second Place  
Cory Bailey  
Sandy, Utah  
"TGI Porter"

### Ingredients for 5 gallons

- 8 pounds two-row malt
  - 1 pound Munich malt
  - 1/2 pound crystal malt
  - 1/2 pound black patent malt
  - 1/2 pound chocolate malt
  - 1 ounce Bullion hops (60 minutes)
  - 1/2 ounce Cascade hops (60 minutes)
  - 1/2 ounce Cascade hops (2 minutes)
  - 1 teaspoon gypsum
  - 1/4 teaspoon Irish moss
  - cultured Sierra Nevada yeast in a one-pint starter
  - 3/4 cup dextrose to prime
- Original specific gravity: 1.057
  - Terminal specific gravity: unknown
  - Boiling time: 60 minutes
  - Primary fermentation: two days at 70 degrees F (21 degrees C) in glass



- Secondary fermentation: six days at 66 degrees F (19 degrees C) in glass
- Age when judged (since bottling): three months

### Brewer's specifics

Added 2 1/2 gallons of water at 130 degrees F (54.5 degrees C) to grain. Held at 122 degrees F (50 degrees C) for 30 minutes. Added 5 quarts of water at 208 degrees F (98 degrees C), raising temperature to 144 degrees F (62 degrees C). Added heat and held at 154 degrees F (68 degrees C) for 10 minutes. Added heat and raised temperature to 158 degrees F (70 degrees C), then held until conversion. Raised temperature to 170 degrees F (76.5 degrees C) and lautered in a Zapap lauter-tun. Sparged with 4 1/2 gallons of water at 170 degrees F (76.5 degrees C).

### Judges' comments

"Fruity, herbal aroma, later a bit sherrylike. Good balance, smooth, slightly sticky texture. Well balanced, with alcohol a bit high for the style."

"Beautiful beer, hard to fault. Body is, if anything, light. But not *too* light. A very fine porter, I'd like to have more."

"Good roast in aroma, little hops, clean. Good balance, slightly old (some oxidation in aftertaste). Overall a very good porter, on the alcoholic side, which masks some other flavor components."

HID LIGHTS, ROCKWOOL, HYDROPONICS, ORGANICS, ETC.

# ALTERNATIVE GARDEN SUPPLY

## THE PROFESSIONAL APPROACH FOR THE HOBBY GROWER AND HOME BREWER

### CHICAGO AREA STORE:

CHICAGO INDOOR GARDEN SUPPLY  
297 N. BARRINGTON RD.  
STREAMWOOD, IL 60107  
(708) 885-8282

### MINNEAPOLIS AREA STORE:

BREW & GROW  
8179 UNIVERSITY AVE. N.E.  
FRIDLEY, MN 55432  
(612) 780-8191

### MAIL ORDER SALES:

ALTERNATIVE GARDEN SUPPLY INC.  
297 N. BARRINGTON RD.  
STREAMWOOD, IL 60107  
(800) 444-2837



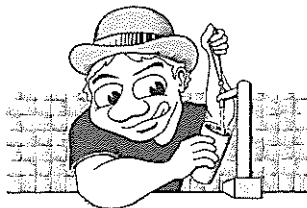
MON - FRI: 10-7pm SAT: 10-5pm

# CALL FOR A FREE CATALOG 1-800-444-2837

HOMEBREW EQUIPMENT, MALT EXTRACTS, HOPS, YEAST, ETC.

## BROWN ALE

**Second Place**  
**Charles Lawhon**  
**Holly Springs,**  
**North Carolina**  
**"Dottie's Brown Ale"**



### Ingredients for 3 gallons

- 3 1/3 pounds American Brewmaster dark malt extract
- 6 ounces crystal malt
- 4 ounces chocolate malt
- 1/2 ounce Fuggles hops (60 minutes)
- 1/2 ounce Willamette hops (15 minutes)
- 1/2 ounce Willamette hops (finish)
- 1 teaspoon water salts
- 1 teaspoon Irish moss
- Wyeast 1084 liquid yeast in a 25-ounce starter
- 1/2 cup corn sugar to prime

- Original specific gravity: unknown
- Terminal specific gravity: 1.012
- Boiling time: 60 minutes
- Primary fermentation: seven days at 70 degrees F (21 degrees C) in plastic
- Age when judged (since bottling): four months

### Brewer's specifics

Steeped grains for 25 minutes while raising tempera-

ture from 60 degrees F (15.5 degrees C) to 212 degrees F (100 degrees C). Boiled all 3 gallons of wort.

### Judges' comments

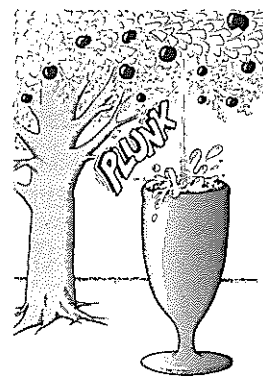
"Good sweet aroma. Nice malt flavor and good balance. Aftertaste fades a bit quickly, and could use more malt character. Very good beer, but needs a bit more of everything to bring flavor out."

"Caramel-sweet, good low bitterness level. Aftertaste fades quickly. Body thin. A beer like Newcastle brown ale, but caramel character needs to be reduced. More maltiness needed."

"Boost the malt for more body and character."

## FLAVORED MEAD

**Second Place**  
**Buck Wyckoff**  
**Houston, Texas**  
**"Prick Pearly's**  
**Cactus Mead"**



### Ingredients for 5 gallons

- 8 pounds clover honey
- 37 medium prickly pear cactus fruits
- 2 packages Red Star sherry yeast

**Munton & Fison**

## Tradition and Progress

- All the traditional quality of Munton & Fison.
- Now packed in new - State of the Art labels.
- With "Pilsner" and "Canadian Ale" as exciting new products.
- And new "All Malt" recipes specifically for the U.S.A.

Available from your local homebrew retailer.

Wholesale distributors nationwide:

Wines Inc., 1340 Home Avenue, Akron, Ohio 44310, U.S.A. 1-(800)-321-0315  
 Crosby & Baker, 999 Main Road, Box 3409, Westport, Massachusetts 02790.  
 1-(800)-992-0141

Munton & Fison products are distributed in Canada by:

Wine Art Inc., 250 West Beaver Creek Road, Unit 8-10, Richmond Hill, Ontario, L4B 1C7, (416)-487-7125  
 Wine Art Inc., 6691c Elmbridge Way, Richmond, Vancouver BC. (604)-273-1240  
 FAX 44-449-677800



## What Cabernet Sauvignon grapes are to red wine, Maris Otter barley is to ale malt.

**M**aris Otter is a rare, old fashioned two-row barley, low in yield per acre and tough to grow. Seasoned brewers still insist on the delicious, rich, plump, nut-like character and the finesse that the variety gives their pale and brown ales, porters, stouts and barley wines. Crisp Malting Ltd. of Great Ryburgh continues to contract with local Norfolk farmers to supply them this extraordinary barleyscorn. Crisp maintains one of the few remaining traditional floor maltings in England. Their fine pale, crystal, and dark malts are now available to micro- and home brewers in the U.S. and Canada through Liberty Malt Supply Company and their retail agents.



Dealer inquiries welcomed

## LIBERTY MALT SUPPLY COMPANY

☆ America's finest selection of malt ☆ Founded in 1921 ☆  
1418 Western Avenue, Seattle, WA 98101— Tel. 206-622-1880 Fax 206-622-6648

**Crisp Maris Otter won 1st place at this year's National Malting Barley Competition.**

Special offer—Michael Jackson video "The Beer Hunter" 2 Volume set - \$24.95

- Original specific gravity: 1.122
- Terminal specific gravity: 1.008
- Primary fermentation: three months at 50 degrees F (10 degrees C) in glass
- Age when judged (since bottling): two and one-half years

### Brewer's specifics

Prickly pear fruits mashed and steeped at 186 degrees F (85.5 degrees C).

### Judges' comments

"Lots of prickly pear, some honey, slightly fruity in aroma. Alcoholic, sweet, full-bodied, not a lot of honey, but it's there. Smooth. A lot of prickly pear, nice sweetness, good fruit-sweetness balance. Really good prickly pear mead—keep up the good work!"

"Huge expression of honey, fruit comes through; slight mustiness. Good legs, good alcohol, nice balance. A very big mead with good balance."

## TRADITIONAL MEAD

### Second Place

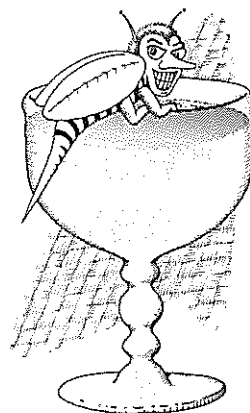
Walter Dudley  
Denver, Colorado  
"New Moon Mead"

### Ingredients for 5 gallons

16 pounds South Dakota fresh honey

- 5 teaspoons yeast nutrient salts
- 5 teaspoons acid blend
- Lalvin EC1118 yeast

- Original specific gravity: Unknown
- Terminal specific gravity: Unknown
- Primary fermentation: three weeks at 76 degrees F (24.5 degrees C) in glass
- Secondary fermentation: two months at 76 degrees F (24.5 degrees C) in glass
- Age when judged (since bottling): seven months



### Judges' comments

"Moderate honey aroma. Lovely gold color, clear. Sweet start, nice honey flavor with a hint of citrus, very sweet lingering finish. A nice clean mead. Could probably benefit from more aging."

"Honey, apple, sulfur and grassy aromas. Needs more honey aroma. Color and clarity excellent. Nice honey flavor, very good! Could use even more honey flavor, but this is great!"

"Beautiful expression of honey. Could be stronger, but it's very nice and delicate! Nice acid balance, good thick body. Needs more alcohol to cut honey. Did fermentation stick or slow down?"



# DEAR PROFESSOR

PROFESSOR SURFEIT

## Bad Dreams and Mead

Dear Professor,

Last night I had an anxiety dream about my mead. I dreamed that my wife, feeling a need to recycle my carboys, poured my fermenting mead into a square wide-mouthed flower vase and floated the fermentation lock perfectly upright on the open container of mead.

Upon discovery I was livid! I yelled at her! I jumped up and down repeatedly. I was just on the verge of bringing her to tears when I awoke.

Please help me interpret this dream. What does it all mean?

Ever your student,  
Jack Roosevelt  
Boulder, Colorado

Dear Jack-o,

A classic case of feeling guilty. When was the last time you shared your mead with your wife? Maybe you should take down the electric cage surrounding your mead. I mean after all, what's a few good bottles of mead shared with the one you love? C'mon Jack, loosen up. I know for a fact that mead is best when shared and can be a man and woman's best friend.

Guilty,  
The Professor, Hb.D.

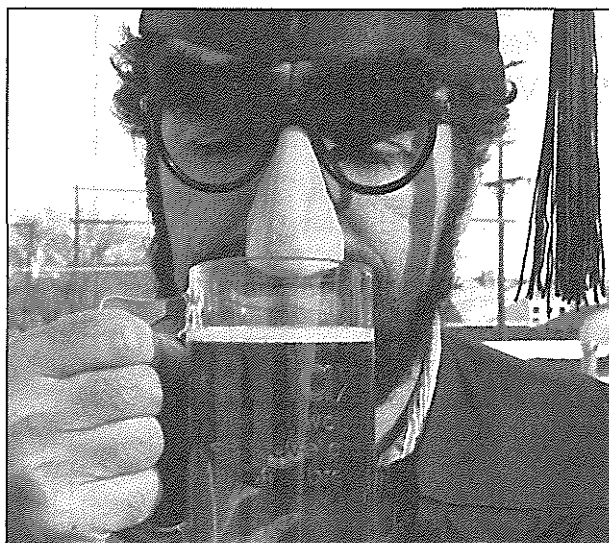
## Take a Bath, Buddy

Dear Professor,

Hope you can help me with a problem I have each summer during

the hottest months.

On the way home from work I spend most of the time thinking about my frosty homebrew in the fridge and/or a refreshing shower.



Professor Surfelt, Hb.D., Wurryphree, Colo.

As I arrive home, I'm burdened with the weight of indecision. Should I quaff a quick one or hit the showers?

Sometimes the decision takes an excruciatingly long time. Once it took 30 seconds.

I know you can help.

Trying to avoid the stress,  
Martin Jordan  
Toronto, Ontario, Canada

Dear Martin, ole buddy,

Hey listen, just take a bath. Relax. Don't worry and have a homebrew. You deserve it. But if you really must take a shower, decant that bottle

of homebrew into another clean bottle and long neck it to your thirsty lips.

No stress in Canada please,  
The Professor, Hb.D.

## Country Pumpkin

Dear Professor,

Michael Jackson's *New World Guide To Beer* describes a pumpkin beer brewed in the United States. The novelty of this beer appeals to me and I would like to try making a batch. I brew from grain and would appreciate a recipe and mashing particulars.

Sincerely thirsty,  
Richard Pinnell  
Nipean, Ontario, Canada

Dear Richard,

Must you? Must you brew from all grain? Must you brew from all grain and want to make a pumpkin beer? Must you want to do this and live so far from me? Must you probably brew this and never get to share it with me? Must you?

I've tasted some great pumpkin brews. Hey they really can taste like beer and like pumpkin. Go easy on the pumpkin pie spices, should you choose to use them, and you've got yourself a winner, like Sal Pennacchio of Staten Island who took third place in the 1990 AHA National Competition. Look for his recipe in this issue.

But in essence, for five gallons, mash 10 pounds of grain with the cooked pulp from a 10-pound pumpkin and add 1 to 2 teaspoons of pumpkin pie spice or none at all.

Must you,  
The Professor, Hb.D.



## Ring Around the Collar— Revisited

Dear Professor,

I recently brewed a batch and had a rather unpleasant surprise when I picked up a bottle to do my first tasting. The beautiful coppery color that could be seen in some of the clear bottles had a very ugly ring of some substance around the interior of the bottle right at the top of the beer.

Upon further inspection, I saw that it was in all bottles, whether brown or clear. The beer tasted good and in all other ways seems to be acceptable. This "ring around the bottle" is something I would like to eliminate. Hope you can diagnose the problem and give me the cure.

Your patient,  
patiently waiting your reply,

Kip Will  
Shelby, Ohio

Telephone: (503) 254-7494 • 7024 N.E. Glisan Street • Portland, Oregon 97213 U.S.A.



**Oregon  
Specialty  
Company,  
inc.**

Established in 1963

WHOLESALE ONLY

**Complete Line for  
HOME BEER & WINE MAKERS**

Our Own Manufacture:

**NEW IMPROVED RED TOP  
JET BOTTLE CAPPER-HAND**

Now also caps Imported and Domestic  
Regular and Screw Top Bottles

**JET SPRAY BOTTLE WASHER  
Automatic Bottle Filler**

Dear Kip,

Yep. You got it. Ring around the collar. Whether you think you can taste it or not, you've got a bacterial contamination. You may be happy with your beer. But I can assure you, once you get rid of the cause of the bacteria and the bacteria, you will like your beer a whole lot better. Or my name doesn't end with an Hb.D.

Forget any cleaner or sanitizer you may be told to buy. Get good old cheap, and very effective, household bleach. Add 2 ounces of bleach for 5 to 8 gallons of cold water. Use a plastic trash pail. Soak the bottles overnight and the next day those rings (probably you have several in each bottle from successive batches) will be gone. Soak your carboys with cold water and 1 to 2 ounces of bleach. Soak your hoses and rubber corks and fermentation locks.

Now you're on the right track.

Yes, and rinse the bleach-soaked items with hot tap water. Don't worry.

Bleached out,  
The Professor, Hb.D.

## Fermentation Forever?

Dear Professor,

I am a new brewer and have encountered a problem with a large percentage of the beers I've brewed becoming overcarbonated as they age until they reach the point of gushing. Some of the beers have shown signs of autolysis—bubbles rising in the air lock after days of inactivity, and some have not so I can not relax when brewing. I have lost many dollars in wasted materials.

I have read the *Complete Joy of Home Brewing* over and over searching for the answer, but after paying particular attention to sanitation and trying to control temperature, my problem continues. Could either of the following be the cause? They were not addressed in the book.

(1) Water—My water comes from a private well. I have had it tested for contamination, and the results show it is as good as city water. Remember I must rinse with this water after sanitizing, right?

(2) Temperature—I do not have a basement. The lowest temperature I can maintain is 75 degrees F (24 de-



## FINALLY... GLASSWARE

- A. 14 oz. Catalina \$4.20/\$19.99 set
- B. 23 oz. Wheat \$3.99/\$19.99 set
- C. 14 oz. Footed Pilsner \$4.20/\$19.99 set
- D. 12 oz. Pilsner \$2.99/\$15.99 set
- E. 19 oz. British Pub Mug \$3.99/\$19.99 set
- F. 16 oz. Pint Glass \$1.99/\$10.99 set
- G. 19 oz. Pub Glass \$3.80/\$19.99 set

**set=6 glasses**

**THE BREWERY  
11 MARKET ST.  
POTSDAM, N. Y. 13676  
1-800-762-2560**



grees C) in the summer, 68 degrees F (20 degrees C) in winter. Storage temperature is about 70 to 75 degrees F (21 to 24 degrees C) in summer, 60 to 65 degrees F (15.5 to 18.5 degrees C) in winter.

Please send anything that may help me relax.

Thanks,  
Bernard Dotts  
Charlotte, North Carolina

Dear Bernard,

Oh, how you play that same old song. But it ain't sweet music, is it? Yep, I've heard of this prolonged fermentation a lot. In fact, I automatically ask (in your case I looked at your letterhead), "where ya from?" Not that I'm looking to change the subject or anything like that, but it seems that long fermentations are more prone to the warmer climates and seasons.

The way I figure it, long fermentations are often a result of some kind of wild yeast that just likes to break down those unfermentables and ferment them—slowly. Where'd you get them? Maybe from the air. Maybe from your yeast source. Some dried yeasts will have wild yeast counts large enough to make a difference.

Bernard, try changing your yeast brand. Then try looking at your sanitization techniques.

By the way, autolysis isn't known for producing a lot of bubbles. You just got some wild yeast in there. You say you rinse with tap water. Hot tap water is best.

I bet it's the yeast  
you started with,  
The Professor, Hb.D.

## Chill Haze in Racine

Dear Professor,

After reading *zymurgy* from cover to cover, it seems many homebrewers have a problem with chill haze. My question is what is chill haze (it sounds too meteorological), should the first-time brewer be concerned and what can I do to prevent this from occurring. Thank you for your time and cooperation.

Sincerely,  
Gregory T. Westrich  
Racine, Wisconsin

# Beer & Brewing, Vol. 10

A whole Conference in your hands. Over a dozen talks by experts in homebrewing. Get it for your library and your beer. You'll love it!



\$20.95 (AHA Members \$18.95), plus \$3.00 domestic P & H.

Brewers Publications, PO Box 287, Boulder, CO 80306-0287,  
(303) 447-0816, FAX (303) 447-2825.

Dear Gregory,

Hey now, remember, RDWHAH (relax, don't worry, have a homebrew). Chill haze is precipitated protein, tasteless and odorless, but causes a haze at cold temperatures. Want to minimize it? Brew darker beers with roasted malts. That will reduce chill haze. Keep the finished beer cold in the fridge for a few weeks, then it will settle out. But above all don't get bent out of shape. At the first sign of weakness, grab a stone mug.

Keep on brewin'  
The Professor, Hb.D.

## Sweet Brewing Dreams

Dearest Professor,

I wanted to take advantage of Valentine's Day to express the effervescent feelings that have been brewing since I joined the AHA.

Oh where to begin. Wafting, bubbling, gurgling, foaming. All I think about are your comforting, gentle words supporting me in this path. Sometimes I even imagine us brewing together.

In this recurring dream of mine, you and I are standing around a steaming kettle of boiling, frothy wort—our bodies dripping with sweat and our eyes glazed with the sweet stickiness of the moment. I watch

your muscles ripple through the frayed threads of your shirt as you grasp the long sturdy handle of the wooden stirring spoon. I turn to you and in my deep throaty voice say, "Sparge me, extract my sugar, increase my gravity, barrel me." Your twinkling eyes lock with mine, your head slyly tilts down, and with an enigmatic smile you breathe, "Relax, baby, don't worry, I'm your homebrew."

I always wake up in a cold chill haze at this point in the dream and can't sleep for hours. This lack of sleep is affecting my job and family relations. I can't afford a psychiatrist and can't talk to my husband. Please relieve me!

I continue to pay my AHA dues in hopes that my check will touch your malty hands, somehow connecting our spirits. Is my imagination too wild for you?

Am I hopping up the wrong tree or is there a chance that I could ever be your head brewer? You so bring out the yeast in me.

See you in my dreams, my precious  
little malt worm,  
A Shy Brew Baby

Dear Babe,

Baby, baby, baaabee. Ohhhhh  
how I love to call you sweeeeeeet baby.

Until we meet, I'll remain,  
The Professor, Hb.D.

# Soar to New Heights with American Eagle

- Finest Quality Beer
- Made with Six-Row Grain
- Taste the Difference

Available in:

3.3 lb cans

Unhopped—Light, Amber, Dark

Hopped—Light, Amber, Dark

American Wheat • Lager

Pale Dry • Traditional Stout

American Ale



- Sold in many fine Retail Shops throughout the U.S. and Canada
- Wholesale distributors in the U.S.:  
Mayer's Cider Mill, Inc., Webster, N.Y.
- Canadian Wholesalers  
Vinotheque, Dorval, Quebec



## The Fresh Approach! Introducing Europe's Noblest Hops...

German HERSBRUCKER (Hallertau)

English FUGGLES

Czechoslovakian SAAZ

Yugoslavian STYRIAN GOLDINGS

At last... fresh leaf aroma hops carefully compressed into 1/2oz. plugs and foil wrapped in vacuum packs to protect them from light and oxygen! Sealed fresh in England — never opened until they hit your retail shop!

- Each pack labeled with alpha acid rating!
- Available in 2 sizes:  
10 plugs (5oz.) to a sealed pack  
200 plugs (6.25 lbs.) to a sealed pack

Available from your quality  
homebrew supplier through:



**CROSBY & BAKER**

999 MAIN ROAD, PO BOX 4409, WESTPORT, MASSACHUSETTS 02190  
Phone (508) 636-5154

1-800-992-0141

Wholesale only!

# THE BEST FROM KITS

KURT DENKE  
DAN FINK



alt may be the soul of beer, but creativity is the soul of homebrew. Brewing seems a bit like alchemy. When I brew, I feel like Doctor Frankenstein must have felt in one of his better moments—as though the liquid in my kettle is the primordial soup (yum!), and I'm creating life. Perhaps this is why I only brew during thunderstorms. It might even explain the hunched-over posture of my brewing partner, Igor.

Now, if Doctor Frankenstein were handed a homebrew kit, he'd probably eye it a bit suspiciously, as though someone were trying to sell him Immortality-In-A-Drum. The good doctor would probably appreciate the ease and convenience, but might also feel that this is the sort of thing that can take the fun out of being a mad scientist.

Last issue, I talked about some of the simple changes that can be made to kit beers to remedy the deficiencies of the recipes printed on the labels—conversion to all-malt, addition of aroma hops and wort boiling. This time around, we'll expand on that theme just a bit, with the aim of bringing as much madness as possible into this mad science.

Most homebrew kits were not designed by hop fanatics. In fact, some are downright anemic when it comes to bitterness. Fortunately, however, it's easy to correct this. We can modify the recipe to increase the ratio of hopped malt extract to gallons of wort, or we can add more bittering hops, or we can do both. If you like assertively

hopped beers, these options will improve your appreciation of kit beers immensely.

Similarly, kits for darker styles of beer tend to be extremely gentle in specialty grain flavor. This is particularly true for stout kits, which usually have only a hint of the roasted barley character that a typical commercial stout has. Here, the solution is just the same—either increase the kit-to-water ratio or add some specialty grains to bring up the flavors you want in your beer. If you like full-flavored beers, don't be timid. Frankenstein's monster wasn't everyone's kind of fellow, but he made one heckuva first impression.

With two of the kits reviewed here, I made smaller batches than the standard five gallons, using just one can of extract. You can multiply these proportions by two if you prefer a more normal-sized batch.



## Mountmellick Brown Ale

Mountmellick is a well-known name in kits, especially for its excellent Irish stout kit. Since Mountmellick stout is one of the most full-flavored kits on the market, this seemed like a promising product.

*For 2 1/2 gallons:*

- 4 pounds Mountmellick Brown Ale kit
- 1 ounce Styrian Goldings hops
- ale yeast
- 1/4 cup cane sugar (for priming)

We boiled the extract with 1 1/2 gallons of water for 10 minutes, added 1/2 ounce of Styrian Goldings, boiled for another five minutes and then added the remaining 1/2 ounce of Styrian Goldings. We topped up the volume to 2 1/2 gallons, cooled it and pitched the yeast. All the standard miracles happened, and there was beer.

Wow! This beer has a rich chocolate-brown color and a nice full body. There is a definite roasted flavor, probably from chocolate malt and/or black malt, and a pleasant medium hop bitterness.

## Munton & Fison Yorkshire Bitter

Munton & Fison has recently introduced a new line of kits in 4-pound cans, including a Yorkshire Bitter. A couple of winters ago, I had the privilege of touring the Samuel Smith Brewery in Tadcaster, Yorkshire, and drinking Old Brewery Bitter in real

## Chill Out!!

The best selections of grains, hops and yeasts around:

- 37 Types of Grain
- 22 Hop Pellet Varieties
- 16 Hop Flower Varieties
- 21 Yeast Liquid Yeasts

and...

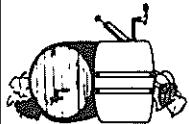
All the equipment and supplies necessary for the beginner to the most advanced all-grain brewer at the right price

Write or call for free catalog:

The **FROZEN** Wort

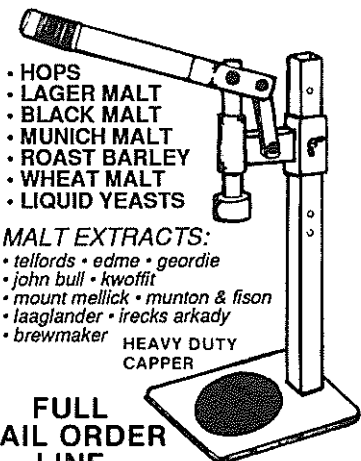
P.O. Box 947, Dept. SUZ1  
Greenfield, MA 01302-0947  
(413) 773-5920  
FAX (413) 772-2333

## F. H. Steinbart Co.



234 SE 12th  
Portland, OR 97214  
(503) 232-8793

- AMERICAN AND BRITISH BARLEY MALTS
- FLAKED BARLEY AND MAIZE
- CRYSTAL MALT
- CHOCOLATE MALT
- DEXTRIN MALT
- TAPPER SYSTEMS AVAILABLE



### MALT EXTRACTS:

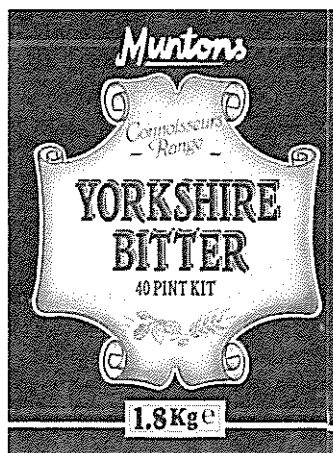
- tellfords • edme • geordie
- john bull • kwofit
- mount mellick • munton & fison
- laaglander • irecks arkady
- brewmaker

HEAVY DUTY  
CAPPER

FULL  
MAIL ORDER  
LINE

WRITE FOR OUR FREE CATALOG

ale form. Sam Smith's is one of the last British brewers using oak casks for dispensing, and may be the only brewer still using the eccentric Yorkshire blue slate square fermenters. These fermenters, literally constructed of massive sheets of blue slate, are quite a sight when the fer-



mentation is active. The foam sort of boils and gurgles, and bits of it actually leap into the air from the vigor of the ferment. It's not unlike the aforementioned primordial soup.

George Hummel, a fellow Philadelphian, brewed this one up like so:

For 5 gallons:

- 4 pounds Munton & Fison Yorkshire Bitter kit
- 3.3 pounds Northwestern Gold hopped extract
- 1 ounce Hallertauer hops
- 1 1/2 ounce Styrian Goldings
- 1 teaspoon gypsum
- 1 teaspoon salt
- Ale yeast (from kit)

Your local homebrew store probably doesn't have any Yorkshire blue slate. Of course, if you have friends in the stone business in Yorkshire, you can bolt together your own slate square fermenter, but you'll have a devil of a time hoisting the thing up onto the kitchen table at bottling time. George used a carboy—less romantic, but easier on the back.

The malt, gypsum, salt and 1/2 ounce of Hallertauer hops were boiled for 60 minutes. Another 1/2 ounce of Hallertauer was added 30 minutes from the end of the boil and 1 ounce of Styrian Goldings hops was added five

minutes from the end of the boil. The last 1/2 ounce of Goldings was used for dry-hopping in the fermenter. The sort of embellishment that this recipe represents is the perfect way to personalize a kit beer to fit your individual taste. Of course, all sorts of other things could be done to this and other kit beers. This is only a single sample out of millions of possibilities.

This beer came out just great! The color was a deep reddish to light brown, and the body was pleasantly full. The bitterness was neither too light nor tongue-numbing. A cask of this, a wheel of Stilton and the North York moors could make for a wonderful weekend.

## Arkell's Lager

English lager is the official drink of those famous British soccer fans, who inspired the term "lager lout." This kit, however, is manufactured by the well-respected Edme Malt Products Co. and bears the name of a highly regarded regional brewery in Swindon, Wiltshire. Accordingly, you don't have to be loutish to brew with it. The label depicts a steam locomotive and the logo of the Great Western Railway, relics of the grand old days of rail travel when Swindon was a major rail center. But on to the beer.

For 3 gallons:

- 4 pounds Arkell's Lager kit
- 1/2 ounce Saaz hops
- lager yeast
- 3/8 cup cane sugar (for priming)

We boiled the 4 pounds of extract in one gallon of water with 1/2 ounce of Saaz hops for 10 minutes, then strained it off into a carboy with 2 gallons of top-up water. The OG was 1.053, the FG 1.013. This batch was fermented with lager yeast in a refrigerator. If you can't manage a cold fermentation, the Edme ale yeast that comes with the kit is just fine.

This beer had a rather surprising deep copper color, with a definite caramel aroma, which possibly indicates caramelization during the extract concentration process. The body was very light and the bitterness very low, making it a suitable beer for people with extremely gentle tastes—I would suggest adding some bittering hops to give this beer a bit more oomph,



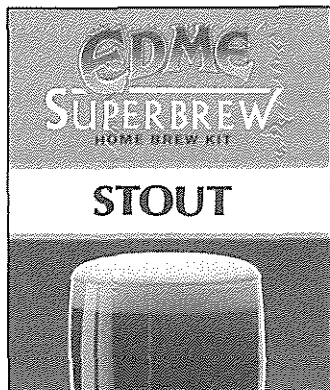
but it may be just the thing for introducing skittish, anti-bitter people to homebrew.

—Kurt Denke

## A New Edme Stout Kit

A trend is building in the homebrew kit market—all-malt beers that need no sugar or malt extract added. Edme Ltd. said it recently has changed its stout kit to focus on quality instead of quantity. The old kit made five gallons and called for the addition of corn sugar. The new version contains about the same amount of malt extract, but makes three gallons of beer with no corn sugar or extra malt required.

I brewed the new Edme stout according to their directions, adding no hops, malt or specialty grains. The instructions called for boiling the wort 15 minutes, then pouring it into a primary fermenter containing cold water. I used a five-gallon glass carboy as a primary. I used Edme yeast and did not rehydrate it before pitch-



ing, as the instructions did not mention that procedure. The OG was 1.040.

The fermentation started within four hours, and at 60 degrees F (15.5 degrees C) the yeast finished the majority of its work in only three days. I kegged the stout with one-quarter cup of corn sugar for priming after nine days of fermentation. The FG was 1.009, giving about 4 percent alcohol by volume.

The result was impressive, a big improvement over a kit with corn sugar. The stout was very smooth and creamy and had no off-flavors. The body was a little on the thin side

and the roasted grain flavors were subtle but definitely present. The hop bitterness was not high but balanced well with the malt. The national beer judge with whom I tasted the results was very impressed—he said it was one of the best kit beers he had tried. Steeping and removing one-quarter pound roasted barley and one-half pound crystal malt in the brewpot before adding the kit would improve the body and roasted flavor, but the

kit was very tasty as it was.

The trend toward all-malt, no-sugar kits is a positive one for the whole brewing community. It gets beginners started on the right foot, while giving more experienced brewers a good, quick-and-easy beer to make when there's no time for brewing from scratch. In upcoming issues of *zymurgy*, we'll be reviewing more of these new all-malt kits.

—Dan Fink

*"Our news is as fresh as your Beer!"*



For the latest news, views, rumors, etc. on the "craft-brewed" beer movement, read the

**Celebrator**  
Beer News Brewspaper

Dude, I can't wait another minute. Enclosed is my check for \$14.95. Please send me one year of the totally awesome Celebrator Beer News. "I'm stoked!"

send to: Name \_\_\_\_\_  
Box 375 Address \_\_\_\_\_  
Hayward, City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_  
CA Phone \_\_\_\_\_  
94543 (Or, send \$1 for sample issue First Class Mail!)

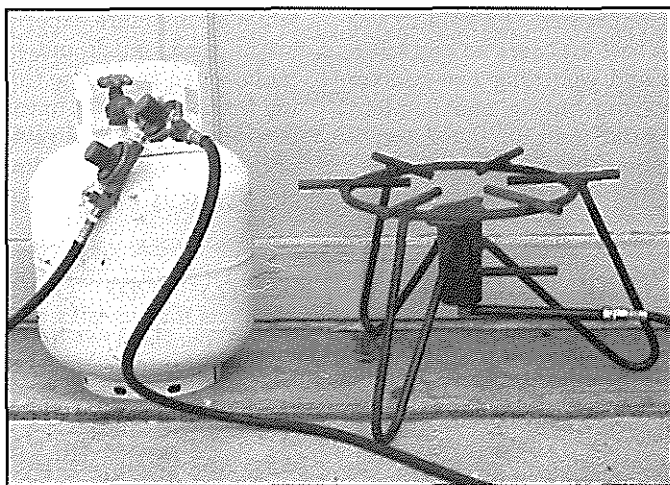
The American Homebrewers Association

*Club-Only Competition*  
**Weiss is Nice**



Send your club's best wheat beer to the "Weiss is Nice" competition. Entries due **August 2, 1991**. Three bottles per entry, \$5 fee. Please use the AHA Sanctioned Competition entry and recipe forms. All clubs registered with the AHA are eligible.

**Send all entries to:** American Homebrewers Association, 736 Pearl Street, Boulder, CO 80302. Call (303) 447-0816 for details and rules.



**King Kooker**

## REVIEWS

### Big Brute of a Burner

Brewing is always a blast, but heating a house with the brewpot in summer is most definitely *not*, not to mention tying up the kitchen for a few hours at a time. Some dedicated brewers have constructed 10- to 15-gallon outdoor "picobreweries," while others simply prefer the great outdoors for their five-gallon batches. Brewing outside requires a burner of some sort, and quite a few brands of propane and natural gas burners are on the market.

I recently tried the King Kooker (formerly called the Cajun Cooker) made by Metal Fusion Inc., with my outdoor all-grain setup. I had made burners from two different hot water heaters, but ran into some problems. It took more than 45 minutes to bring 10 gallons of water to a boil and the burners were very fussy about how much oxygen was available. They also were prone to being blown out by the wind, a constant problem in my mountain location.

The King Kooker is a very simple design made of bar steel. It burns

propane only (not natural gas), but the fuel is inexpensive and widely available. My water heater burners put out about 35,000 BTU at full blast; the King Kooker can manage 125,000 BTU. The Kooker comes with six feet of propane hose, a regulator and a flame control/shut-off valve. A steel baffle can be swung into place over the flame outlet to avoid hot spots. Remember that burners such as this one should *not* be used indoors! In addition to producing huge volumes of water vapor, they remove oxygen from the air and can result in dangerously high levels of CO<sub>2</sub> and other gases indoors.

I've been very impressed with the King Kooker's performance. When heating mash and sparge water (or bringing water for an extract batch to a boil), I swing the baffle out of the way and crank up the flame. It will boil 10 gallons of water in only 20 minutes. Your results may differ somewhat, as my home is at 9,000 feet above sea level. It could easily heat a 31-gallon brewpot—the flames go around and up the sides of my half-barrel pot when the burner is turned

up full blast, so I throttle it down for brewing. However, the manufacturer recommends against using anything larger than a 23-gallon pot. The burner also is quite resistant to the wind. Propane use is hard to measure because it varies so much with my outside temperature, but I average three batches of all-grain beer (using two burners) or five batches of extract beer (using one burner) from a 20-pound propane tank.

When there are sugars in the pot (malt extract, mash runoff, honey, etc.), the baffle must be swung into place and the burner throttled down to avoid scorching the wort. I've never scorched a batch using these procedures, but I guarantee it would scorch if you don't follow them. The burner's manual recommends using the baffle only when mashing, but I disagree—it still heats very fast with the baffle in place and burned wort is a taste no one enjoys!

The pot supports are steel bars welded to the frame. The burner stands about a foot high and even my dented half-barrel keg boilers are very stable on it. That's a good thing, too. In my three-vessel gravity-flow system, the top burner sits five feet off the ground, so the top of the keg is over eight feet in the air. Any instability could cause a disaster!

I highly recommend the King Kooker to homebrewers. I've tried other burners that function well, but the King Kooker puts out more heat than most others on the market and sells for nearly half the price of many. Plus, after you add up the cost of buying a regulator, valve and hose for a home-built water heater burner, you've gone over half what the King Kooker costs, and with it there's no labor involved except carrying it in from your mailbox.

The King Kooker is available from many homebrew retailers. To find a dealer near you or for information on other burners by Metal Fusion Inc., contact them at 623 Maria St., Kenner, LA 70062.

—Dan Fink



here are a lot of things American: apple pie, Thanksgiving, Canyonlands, hot dogs, baseball, Lyle Lovett and Nanci

Griffith. But at the risk of sounding a bit too provincial, I've got another to add to the list. Yes, I do live in Colorado with a view of the Continental Divide each day. As I commute to work I watch the sunrise in the rear-view mirror and the mountains to the west glow with morning light. Knowing that ahead of me beyond the mountains and in back of me on the plains, Colorado cowgirls are out there. Doing what cowgirls do.

I sip my new brown ale. It's medium bodied, brown, noticeably bitter with a hoppy aroma and flavor. Nothing like an English-style sweeter brown ale. This seems American to me. An invention by American homebrewers who know no limits when it comes to hops. I've named this brew Colorado Cowgirl because I think there isn't anything more American than a Colorado Cowgirl.

Not overpowering with bitterness, but assertive enough to quench a dusty thirst. It is at the low end of the hop quotient for what I call American-style brown ale.

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

#### *Recipe for five U.S. gallons*

- 6.6 pounds B.M.E Vienna Amber malt extract
- 3/4 pound crystal malt
- 5 ounces chocolate malt
- 5 Homebrew Bittering Units of bittering hop (I used one ounce of 5 percent Fuggles )
- 2 teaspoons gypsum (if your water is very soft)
- 1/2 ounce Fuggles or Goldings hops for flavor
- 3/4 ounce your favorite finishing hop for aroma (I use my homegrown Cascade hops)
- 1 1/4 cup dried malt extract or 3/4 cup corn sugar for bottle priming.
- 2 packages ale yeast or liquid culture

## WORLD OF WORTS

CHARLIE PAPAZIAN

# Colorado Cowgirl Brown Ale

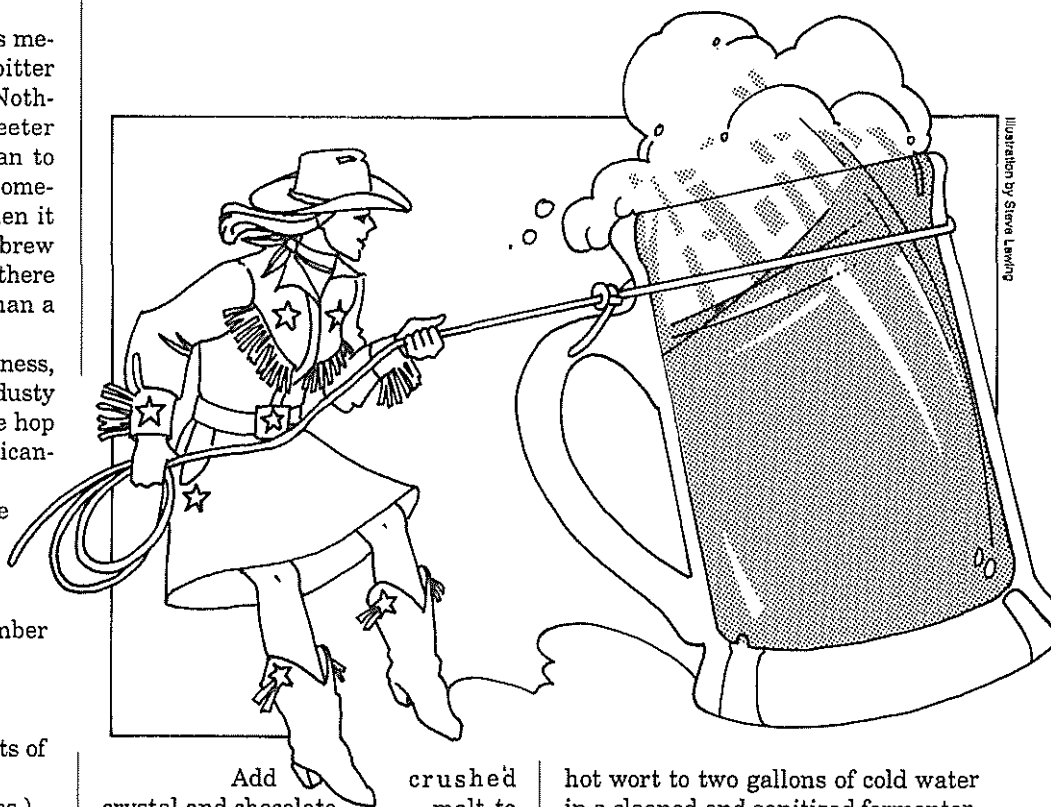


Illustration by Steve Lawing

Add crushed crystal and chocolate malt to 1 1/2 gallons of water and bring up to 150 to 160 degrees F (66 to 71 degrees C) and hold for 30 minutes. Then strain all of the grains out and discard the spent grain. Add the malt extract, gypsum and bittering hops and boil for one hour. Twenty minutes before the end of the boil, add the 1/2 ounces flavoring hops. During the final two minutes of the boil add your finishing hops for aroma.

Strain out the hops and add the

hot wort to two gallons of cold water in a cleaned and sanitized fermenter. Add cold water to bring to five gallons total volume. When cooled to below 70 degrees F (21 degrees C), add yeast and ferment.

When ready to bottle, boil corn sugar or dried malt with 1 1/2 cups of water and use to prime for carbonation. Wait a couple of weeks or so and then relax, don't worry and toast a homebrew to some of the prettiest girls in all the land—Colorado Cowgirls.



## 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.

## STOP GUESSING..??? SAVE TIME...!!!!

Use Personal Brewmaster Ver 1.0 and your PC to:

- **PRINT** Date & Batch info on **Bottle Cap Labels**.
- Place repeat **ORDERS** for **SUPPLIES** with a few easy keystrokes and forget time consuming Order Forms.
- **SAVE** and **EDIT** your Favorite **Brewing Recipes**.
- Other utilities include **Label Maker&Brew Review**

Order Ver. 1.0 for **\$49** plus **(\$4.95 S/H)**. Get 480 Bottle Cap Labels, 48 Bottle Labels, and 25 Order Envelopes **FREE!** MS. res. add 6% Tax. Send Chk/MO to: **JOHNNY BEER, P.O. Box 297, Hickory, MS. 39332** or leave msg (601) 646-4767

# CASCADE

B E E R N E W S

## From the Center of America's Brewing Renaissance

*Cascade Beer News* brings you the best in beer and brewing from the nation's leading beer writers.

Subscriptions cost \$18 for 12 bi-monthly issues, or \$12 for six issues.

For Subscription or Advertising information:

P.O. Box 12247  
Portland, OR 97212  
(503) 224-4114

## FREE CATALOG



*Everything you need  
for beermaking or winemaking!*

- ★ Malt Extracts & Kits
- ★ Grains & Hops
- ★ Brewing Supplies  
& Equipment

*We have been supplying home  
fermenters for over 20 years -  
write or call today!*

- ★ Brewing Yeasts ★
- Full Line - Liquid & Dry

(800) 342-1871

(206) 365-7660

FAX (206) 365-7677

## THE CELLAR

Dept. ZR, Box 33525  
Seattle, WA 98133



## Northeast Brewers Supply

(800)-352-9001

If you live **EAST** of the  
**ROCKY MOUNTAINS** and  
You're Not Buying From Us  
Then You're Probably

### **PAYING TOO MUCH**

For Your Homebrew Supplies.  
**CALL** For Our **FREE** Catalog  
and See the Difference!

This Month's Specials:

**IREKS** 3kg Malt Extract: \$14.10

Wort Chiller: \$22.50

Post Office Box 232  
West Kingston, RI 02892  
(401) 789-9635

# HOME BREW CLUBS

DAN FINK

## ALABAMA

**Lower Alabama LAGERS:** The most exciting news from the LA LAGERS is that they exist! They are a heady bunch of seasoned amateurs in the Mobile area dedicated to the avoidance of pain and inevitable frustration of attempting to reinvent the wheel.

Contact Maarten van der Giessen, 4701 Seabrook Road, Wilmer, AL 36587.

## ARIZONA

**Brewmeisters Anonymous:** On Feb. 24 the club held a brew marathon in response to a dream that president Cassandra had. Six members gathered at the Clark house with their equipment and brewed 70 gallons of beer in an eight-hour period.

Dues are \$15 per year, meetings the second Sunday of the month. Contact Clark Nelson, 6707 S. McKemy St. No. 16, Tempe, AZ 85283, or call (602) 897-1775.

## CALIFORNIA

**The Barley Bandits:** Barley Bandit officers for the 1991 brewing year are Terry Hale, president; Kevin Verble, vice-president; Dick Reese, secretary-treasurer; Vin Ludwig and Sam Piper, activities directors; and Charles Kasicki, newsletter editor.

Dues are \$12 annually. Contact Dick Reese, 105 S. Glendon St., Anaheim, CA 92806, or call (714) 630-6527.

**Brewbirds of Hoppiness:** Contact: Kelly Dunham, 1229 Lerida Way, Pacifica, CA 94044, or phone (415) 355-7143.

**Crown of the Valley Brewing Society:** The club is small, but their membership has been growing lately. They'd love to have new members from the Pasadena and San Gabriel Valley areas meetings at members' homes.

Dues are \$12 per year, \$18 for couples. Meetings are the second Sunday of the month. Contact Greg Stark, 1428 N. Allen Ave., Pasadena, CA or call (818) 794-7989.

**Draught Board:** The Draught Board recently co-sponsored its first competition, the 1991 Bay Area Brew-Off, a great success with 110 entries in seven categories.

Dues are \$1 per meeting or \$7 per year for the newsletter. Meetings are the second Saturday of the month. Contact Harry Graham, 126 LaQuebrada Way, San Jose, CA 95127, or call (408) 258-2792.

**Inland Empire Brewers:** The First Annual Nevada Winterfest Competition sponsored

by the Las Vegas branch of the club was held Jan. 19-20 in Las Vegas with 117 entries. As of March 1, the membership stood at 226.

Dues are \$12 per year, meetings the first Thursday of the month. Contact John Oliver, 1258 Lomita Road., San Bernardino, CA 92405, or call (714) 886-7110.

**The Maltose Falcons:** The Falcons were the prime organizers of the first annual Southern California Homebrewers Festival in Temecula, Calif., which drew nearly 300 people. If you are in the Los Angeles area, please contact them!

Dues are \$20 per year, meetings the first Sunday of each month. Contact R. Bruce Prochal, c/o the Home Wine and Beer Making Shop, 22836 Ventura Blvd. No. 2, Woodland Hills, CA 91364.

**Monterey Bay Brewers:** A new club, MBB held its first meeting and family picnic on St. Patrick's Day at St. Patrick's Homebrew in Santa Cruz. Most of the 12 members are new homebrewers who are very interested in having new members.

Contact Lynne O'Connor, 106 Hagar Court, Santa Cruz, CA 95064, or call (408) 459-0178.

**Redwood Coast Brewers:** Future meetings will include presentations by local master brewers, a project to further develop the club's cooperative yeast bank, and a summer beach party. They also look forward to organizing the Santa Cruz County Fair's homebrew competition again this summer.

Dues are \$12 per year. Contact Michael Byers, 707 Pelton Ave. No. 108, Santa Cruz, CA 95060, or call (408) 426-3005.

**Shasta County Suds'ers:** The club celebrated its 10th birthday at the January meeting. The chocolate cake proved Fred Eckhardt right—chocolate and beer go great together, and none of either was left.

Dues are \$12 per year, meetings the second Saturday of the month. Contact Raymond Ault, PO Box 839, Anderson, CA 96007, or call (916) 347-5475.

**San Luis Obispo Brewing Society (SLOBS):** New members are cascading upon the SLOBS with no relief in sight. The February meeting featured a Pilsener competition. A SLOBfest is scheduled for June-July because the food brought by members is always so good.

Dues are \$1 per month, meetings the third Monday of the month. Contact Howard Gootkin, 1568 Frambuesa Drive, S.L.O., CA 93405, or call (805) 541-0713 in the evening.

**Stanislaus Area Associated Zymurgists (SAAZ):** The recently formed SAAZ had its first meeting at the new St. Stan's brewery/restau-

rant. For the February meeting, SAAZers traveled to Davis where they toured the Back Alley and the SudWerk, and also toured Dead Cat Alley and Rubicon Brewery.

Contact Micah Millapaw, 309 S. Sixth Ave., Oakdale, CA 95361, or call (209) 847-9706.

## COLORADO

**Deep Wort Brew Club:** June 15-16 mark the club's third annual Great Outdoor Brewoff which, as in the past, will take place high in the Front Range of Colorado. The event provides a showplace for outdoor brewing techniques, fine homebrewed beers and barbecue expertise.

Dues are \$5 per year, meetings the third Thursday of the month. Contact Bob Wood, 4515 Ranch Circle, Colorado Springs, CO 80918, or call (719) 531-6450.

**Hop, Barley and the Ale'ers:** Interest in homebrewing in Boulder continues high. Upcoming rituals include Beer and Steer (July 20) and the annual picnic (Aug. 17). Come join them for the fun!

Dues are \$15 per year, picnic the fourth Thursday of the month at the Boulder Brewing Co. (subject to change). Contact John Bates, 862 Cypress Drive, Boulder, CO 80303, or call (303) 499-4012.

**The Unfermentables:** Denver's newest homebrew club, the Unfermentables, will make you a beer you can't refuse. The 50 members include grain brewers, extract brewers, beginners and even a few professionals. Meetings feature a guest speaker and beer of the month.

Dues are \$15 per year, meetings the third Tuesday of the month. Contact Jim Hansen, 1240 Vine St., Denver, CO 80206, or call (303) 333-9182.

## CONNECTICUT

**Underground Brewers of SE Connecticut:** The club tried a new approach to manage the more than 30 members who attended the monthly meeting. They split the group into six panels, each with a mix of new and experienced members. Each of the 22 beers in the competition was tasted by two panels, with the best brews tasted by a panel of experts at the end of the evening.

Dues are \$5 per year, \$10 for drinking members. Meetings are the third Wednesday of the month. Contact Paul Connolly, Box 105, Rowayton, CT 06853, or call (203) 854-9539.

## NEW CLUBS

See regular listings for news from most of these newly-formed clubs.

## CALIFORNIA

**Strand Brewers Club:** Peter Chin Sang, 3432 Studebaker Rd., Long Beach, CA 90808, (213) 425-8700.

## COLORADO

**Foam on the Range:** Pasquale Girolamo, 24859 Pleasant Park Rd., Conifer, CO 80433, (303) 972-8379

## ILLINOIS

**Brewers of South Suburbia (BOSS):** Steve

Kamp, PO Box 461, Monee, IL 60449.

## NEW HAMPSHIRE

**Brew Free or Die:** Ed Boisvert, 36 Otterson St., Nashua, NH 03060, (603) 889-2331.

**New Hampshire Bier Nuts:** David Weisberg, 34 Hardy Ct., Keene, NH 03431, (603) 357-7962.

## NEW JERSEY

**The Yeastie Boys:** Joe Sabin, 13 Burd St., Pennington, NJ 08534-2809, (609) 737-1085.

## NEW YORK

**Name to be Announced:** Helene Windt c/o

Kedco, 564 Smith St., Farmingdale, NY 11735-1168, (516) 454-7800.

## NORTH DAKOTA

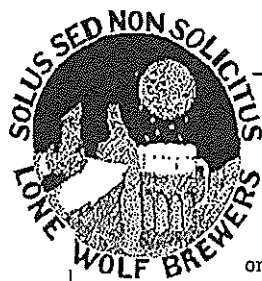
**Prairie Homebrewing Companions:** Ray Taylor, 917 22nd Ave. N, Fargo, ND 58102.

## PENNSYLVANIA

**Harrisburg Area Homebrewers Association (HAA):** Tom Scotzin, 65 CN. 5th St., Lemoyne, PA 17043, (717) 737-0483.

**Homebrewers of Philadelphia and Suburbs (HOPS):** George Hummel c/o Home Sweet Homebrew, 2008 Sansom St., Philadelphia, PA 19103, (215) 569-9469.





## Solus Sed Non Solicitus

In 1978 or '79, I was in graduate school at Indiana University and saw an ad posted on campus advertising a new and easy way to homebrew beer. As it turned out, the ad was by a fellow with a local franchise for homebrew products. As a beer lover for many years, I was skeptical of homebrew, because of the bad experiences I remembered with the old Prohibition-style brewing of my youth. But this stuff was great! A number of other friends in grad school were similarly interested, and we began getting together regularly, helping each other through the learning process. Then we all scattered to different parts of the country.

I moved to Berea, which is dry, and consequently intensified my own efforts at home. But I missed the camaraderie, and there were no clubs locally (nor are there yet—dryness is of epidemic proportions in Kentucky, and my employer frowns on such activities). I remembered from my youth a program in the Boy Scouts called the "Lone Wolf Scout," which was for boys out in the boonies who wanted to belong to the Scouts but who had no troop available. Seemed sensible to me, so I began this "Lone Wolf Brewer" thing, the core of which is that old assembly from graduate school, but others have joined as well.

We now have membership—if a no dues, no meetings, no officers club can have members—in Kentucky, Ohio, Indiana, California, Texas, North Carolina and possibly Michigan (we can't find the guy right now, but he is undoubtedly keeping the faith). Our motto is "Solus sed non solicitus"—alone, but not worrying—and our logo/label features a wolf on a mesa howling at a full moon, the craters of which are magically formed from the bubbles rising from the froth of a gigantic mug of beer.

We very much appreciate the support of the AHA, and the club copy of *zymurgy*. When I receive it, I read it cover to cover, and bring specific items to the attention of various members. Some of them have their own subscriptions, and some do not, but they all appreciate the information. We have also produced an "Introduction to Homebrewing" handout for prospective members.

I am not willing to release the names of the members because some of them are situated like myself—it is considered bad form to be involved in such a dubious enterprise as the creation and personal use of mind-altering substances, i.e. ethyl alcohol.

Anyhow, all that is by way of reminding others to treasure their enviable position and reminding them that there are still some of us out here who must remain, alas, overly circumspect in our private lives. Prosit!

*Michael Berheide, Prime Minister and Secretary General, Lone Wolf Brewers*

or third Thursday of the month. Contact Karl Menninger, RR 1, Box 296, Petersburg, IL 62675, or call (217) 632-2995 (evenings).

## IOWA

**Heartland Homebrew Club:** Dues are \$12 per household, meetings monthly. Contact Craig Olzenak, 1030 High St., Grinnell, IA 50112, or call (515) 236-4033.

## KANSAS

**Kansas City Bier Meisters:** Jackie Rager was rewarded for a year of brewing by being named 1990 Midwest Brewer of the Year.

**Rapsallions:** Dues are \$10 per year, meetings irregular. Contact Richard Seaton, 2476 Coolidge, Wichita, KS 67204, or call (316) 838-3427.

## KENTUCKY

**Louisville Area Grain and Extract Research Society (LAGERS):** The LAGERS second annual Picnic Extravaganza featured 30 gallons of draft, all-grain goodness. The LAGERS are planning their second annual pilgrimage to the Oldenberg Brewery in August. All members, guests and area clubs are encouraged to attend.

Dues are \$12 a year. Contact David R. Pierce, PO Box 22588, Louisville, KY 40252, or call (812) 948-9969.

## LOUISIANA

**Redstick Brewmasters:** Club members brewed 10 gallons of light ale to be kegged and served at the Brew-Off. The possibility of having an annual crawfish boil and Oktoberfest was discussed.

Contact Charlie Milan, PO Box 17661, Baton Rouge, LA 70893, or call (504) 343-2047.

## MAINE

**Maine Ale and Lager Tasters (MALT):** Several MALTsters will be attending the National Conference in Manchester for Club Night and other activities. Car pools will be arranged. Preparations are under way for the Common Ground Homebrew Competition on Sept. 21 at the Windsor Fairground.

Dues are \$10 per year, meetings the fourth Monday of the month. Contact Michael LaCharite, 6 Madelyn Ave., Topsham, ME 04086, or call (207) 729-0225.

**Maine Homebrew Society:** The Society was formed in April to provide a club environment for brewers living in the Portland, Maine, area. As a new club, they are looking for responsible members and a clubhouse that will allow brewing during meetings.

Dues are \$5 per month, meetings the first Monday of the month. Contact Victor Baillargeon, 7 Turner St., Portland, ME, or call (207) 773-6858.

## MASSACHUSETTS

**Barleyhoppers:** Member Dan Young wrote a paper that was an experiment to show the differences among four kinds of mashing, using the same ingredients. The club tasted all four brews and split evenly between infusion and two-step infusion.

Dues are \$12 per year, meetings the first Wednesday of the month. Contact Mark Larrow, 154 King St., Northampton, MA 01060, or call (413) 586-0150.

**The Boston Wort Processors:** The Worts capped off a successful brewing year by winning the Northeast Homebrew Club of the Year award for the second straight time. Bill Murphy was awarded the Wort Processor Homebrewer of the Year.

Dues are \$18 a year, or \$12 for an associate membership. Meetings are the first Friday of

## DELAWARE

**First State Brewers:** The First State Brewers continue to be an active club. Theme tastings dominate the meetings, with parallel brewings, lagers, potlucks, and darks included. Demonstrations include kegging homebrew and club competitions, which add to the fun.

Dues are \$15 per family per year, meetings the third Wednesday of each month. Contact Charles Garbini, 705 Manfield Drive, Newark, DE 19713, or call (302) 368-3417.

## DISTRICT OF COLUMBIA

**Brewers United for Real Potables (BURP):** BURP's 10th anniversary year began with the annual India pale ale competition in January. In early February, BURPs brewed a Thomas Hardy-style barley wine destined to be consumed at the 20th anniversary celebration in 2001.

Dues are \$15 (individual) or \$20 (family) per year, meetings are monthly. Contact William Ridgely, 7430 Gene St., Alexandria, VA 22310, or call (703) 971-5744.

## GEORGIA

**Covert Hops Society:** The Covert Hops Society needs your help! A bill legalizing homebrewing was passed by the Georgia House of Representatives. It will be considered by a Senate committee over the summer (see related story in "Brew News"). They ask homebrewers everywhere to write the committee chairman and urge him to seek committee approval and Senate passage of HB-62. Please write: Senator Arthur Langford, Chairman, Senate Consumer Affairs Committee, Room 320, LOB, Atlanta, GA 30334.

Dues are \$10 per year, meetings the third Tuesday of each month. Contact Ken Dobson, M.D., 2340 Sanford Road, Decatur, GA 30033-5529, or call (404) 634-5980.

## ILLINOIS

**Association of Bloomington-Normal Brewers (ABNORMAL):** An article about homebrewing and the ABNORMAL brewers appeared in the Bloomington newspaper, the *Pantograph*. A good deal of interest was stirred up by the article, and the club experienced an influx of new members.

Dues are \$12 per year, meetings the second Monday of the month. Contact Tony McCauley, 404 Tilden, Place, Normal, IL 61761-1432, or call (309) 452-1084.

**Brewers of Southern Suburbia (BOSS):** BOSS was formed in November by homebrewers for homebrewers, but membership is open to anyone who appreciates good beer. In three months the membership has grown from five to 23.

Dues are \$10 per year, meetings the first Friday of the month. Contact Steve Kamp, PO Box 461, Monee, IL 60449, or call Dean Leto at (708) 479-2900.

**E.Z. Brewers:** E.Z. Brewers has been reorganizing due to heavy attrition. They presently list 70 homebrewers in the southern Illinois region, with about eight active members.

Contact Doug Diggle c/o Old Town Liquors, 514 S. Illinois, Carbondale, IL 62901, or call (618) 457-3513.

**MUGZ:** The person responsible for this month's newsletter did not mail them out—sorry! Dues are \$10 per year, meetings the last Sunday of the month. Contact David Cashion, 927 Cleveland Road, Colona, IL 61241, or call (309) 792-9299.

**Prairie Schooners:** The Schooners are beginning a comparative brewing series to identify differences in brewing techniques and ingredients. The first project is for several members to brew the same recipe, then compare samples.

Dues are \$12 per year, meetings the second

the month. Contact Steve Stroud, 15 Dunbar Ave., Medford, MA 02155, or call (617) 395-6822.

**The Gambrinus Society:** The Gambrinus Society has been meeting each month. They had a very successful party at Christmas, with a potluck supper, special ales and gift exchange. New members joined that night. They have heard from several prospective members via *zymurgy* Club News.

Contact Herbert Holmes, RR 1 Box 168, 92 Marsh Road., Barre, MA 01005, or call (508) 355-2753.

**Trubadours:** Trubadours has instituted a club brewer of the year competition with points earned from head-to-head competitions, imaginative beer names and presentations at meetings.

Dues are \$5 annually, meetings the last Wednesday of the month. Contact Jon P. Stavros, 46 Chalfonte Drive, Springfield, MA 01118, or call (413) 783-1395.

## MICHIGAN

**Ann Arbor Brewers Guild:** For March, April and May the club presented the beers of "Brewola II," their club exercise where many members brew the same recipe.

Dues are \$6 per year, meetings once a month alternating Mondays and Thursdays at members' homes. Contact Rolf Wucherer, 1404 White, Ann Arbor, MI 48104, or call (313) 663-8196.

## MINNESOTA

**No Name Yet:** The first successful meeting was in March. A name will be chosen soon. Future activities such as group brewing, bulk buying and brewery tours were discussed, and a wide variety of great homebrewed beers were tasted.

Meetings are the first Saturday of every other month. Contact Terry Sprung, 204 10th Ave. NE, Rochester, MN 55906, or call (507) 285-0591.

**Northern Ale Stars Homebrewers Guild:** The second annual Northern Ale Stars beer tasting was a whopping success, with over 260 members of the public sampling more than 35 commercial beers, plus a commemorative homebrew.

Dues are \$10 per year. Contact Don Hoag, 5426 Beartrap Road, Saginaw, MN 55779, or call (218) 729-6302.

## MISSOURI

**Missouri Winemaking Society:** At the March meeting Al Marks, enologist at the Hermannhof Winery in Hermann, Mo., spoke on sparkling wines. The tasting will be of homemade and commercial social wines and sparkling wines.

Meetings are the third Thursday of the month. Contact Herman Easterly, 3847 Flora Place, St. Louis, MO 63110, or call (314) 772-0722.

## MONTANA

**Zoo City Zymurgists:** Elections were held in February. Skip Madsen continues as president, Chuck Zadra is the new treasurer and Neal Christensen is the librarian.

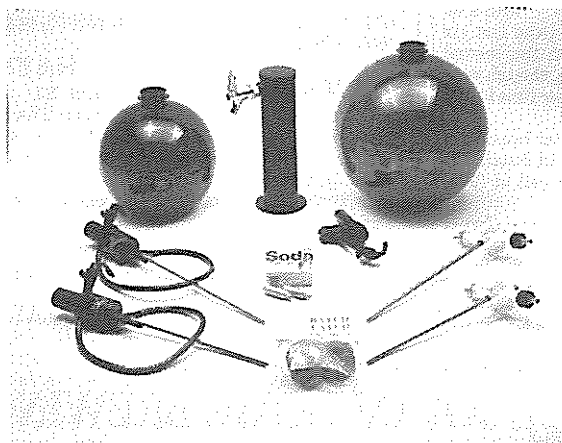
Dues are \$10 per person or \$15 per couple, meetings the second week of the month. Contact Skip Madsen, 1240 S. Second, Missoula, MT 59801, or call (406) 543-6929.

## NEVADA

**Washoe Zephyr Zymurgists:** WZZ and the Reno Homebrewer hosted the HWBTA National Competition in March. Although WZZ failed to unseat the champion Sonoma Beerocrats in the club competition, they did take second place!

Dues are \$10 per household per year, meetings the second Friday of the month (usually) at

# BATCH LATCH DRAFT SYSTEMS



• Complete Systems and individual components available

• 5 gallon and new 2.2 gallon systems available

Available at The Finest Homebrew Retailers

Call For More Information

1-800-762-2560

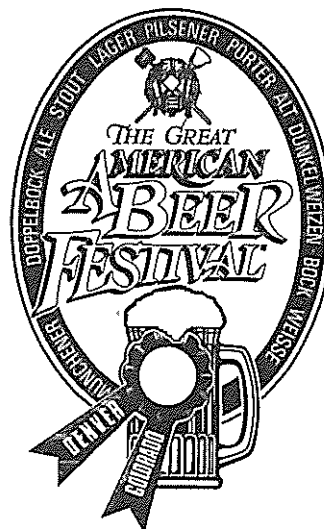
Marc C. Fritz Inc.

11 Market St.

Potsdam, NY 13676

# CELEBRATE A DECADE OF AMERICAN BEER

Over 500 beers, over 200 draught beers, over 150 American breweries, over 6,000 beer lovers. The biggest, the best, the only.



Ten years of serving the finest beers made in this country. A chance to taste all the great beers under one roof. A beer lovers heaven.

Oct 4 & 5, Denver Merchandise Mart  
Denver, Colorado

For ticket, hotel and airline information, call or write the Association of Brewers, PO Box 287, Boulder, CO 80306-0827, (303) 447-0816, FAX (303) 447-2825.

members homes. Contact Eric McClary, 6185 Franktown Road., Carson City, NV 89704.

## NEW JERSEY

**Mid-Atlantic Sudsers and Hoppers (MASH):** The club is growing quickly, with a 50 percent increase in membership in the last six months. All meetings will be on the second Saturday of odd-numbered months, though anyone wishing to have a party any other time is free to do so.

Dues were raised to \$15 per year because of the postal rate increase. Contact Ed Busch, PO Box 105, Flagtown, NJ 08821, or call at (908) 359-3235.

**South Jersey Fermenters Homebrew Club:** SJF membership continues to grow, with

over 15 active members. Experience levels range from the brand new brewer to those the homebrewer with more than 10 years of experience.

Dues are \$12 per year, meetings the last Thursday of the month. Contact Mark Scelza, 617 W. Second St., Florence, NJ 08518, or call (609) 499-0952.

## NEW MEXICO

**The Los Alamos Hill Hoppers:** The Hill Hoppers meet monthly to taste homebrew, visit breweries and brewpubs, and share recipes and techniques. Recent meetings have included viewings of Michael Jackson's "The Beer Hunter" series.

Dues are \$10 a year, meetings the third

Wednesday of every month in members homes. Contact Michael Hall, 505 Oppenheimer Drive Unit 1302, Los Alamos, NM 87544, or call at (505) 662-2130.

## NORTH CAROLINA

**Piedmont Institute of Sud Sippers:** Dues are \$10, meeting the second Wednesday of the month. Contact Corbett Brown, 2805 Lamroc Road., Greensboro, NC 27407, or call (919) 854-3266.

**Triangle's Unabashed Homebrewers (TRUB):** TRUB began the year with a comparison of bottled porters and stouts to determine if there really was a difference between the styles. Examples made by club members of each type compared quite favorably to the better commercial varieties.

Dues are \$15 a year, meetings the second Wednesday of the month. Contact L.H. Adams, 1409 Rosedale Ave., Durham, NC 27707, or call (919) 493-0857.

## NORTH DAKOTA

**The Prairie Homebrewing Companions:** The PHCB of Fargo-Moorhead was born in September 1990 during a weekend field trip to various brewpubs and microbreweries in Minneapolis-St. Paul. An organizational meeting held at "Sherlock's Home," Raymond Taylor was elected president, Martin A. Draper, vice president, Neil Gudmestad, treasurer, and Phillip Nolte secretary.

Contact Ray Taylor, 917 22nd Ave. N, Fargo, ND 58102, or call (701) 293-3679.

## OHIO

**Bloatarian Brewing League:** Homebrewers will meet can collectors when the BBL cohosts a tasting with the American Breweriana Association June 29 at the Drawbridge Inn. The third annual BBL regional beer garden "Beer and Sweat" party at Oldenberg will be Aug 17. Beer lovers, club members and others, are welcome. Contact your club or the BBL for more details.

Dues are \$15 per year. Contact Larry Gray, 7012 Mt. Vernon Ave., Cincinnati, OH 45227, or call (513) 271-2672.

**The Society of Northeast Ohio Brewers (SNOBS):** Started in October 1990, the SNOBS are at 80 members and growing. The club is planning a summer camping trip and an Oktoberfest, and will be taking field trips to Oldenberg (Aug. 17-18) and Toronto/Bufalo.

Dues are \$25 per person, \$40 per household. Meetings are the first Monday of the month. Contact Rick Seibt, c/o the Great Lakes Brewing Co., 2516 Market Ave., Cleveland, OH 44113, or call (216) 383-1414.

## OKLAHOMA

**The High Plains Draughters:** This is a new club with a current membership of 11 and growing. Monthly meetings consist of a demonstration and/or discussion of some aspect of brewing and tasting members' beers, with discussion of recipes and techniques.

Meetings are the third Tuesday of the month. Contact Kent Keller, 8313 NW 113th St., Oklahoma City, OK 73162, or call (405) 721-0508.

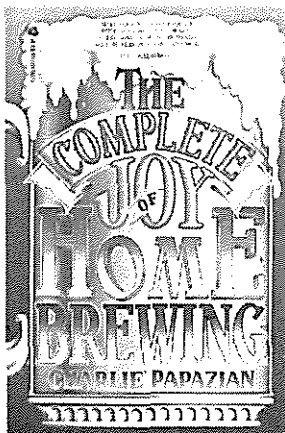
## OREGON

**Oregon Brew Crew:** The Fourth Annual Oregon Brewers Festival is tentatively scheduled for the weekend of July 19-21. Brent Hoffman and Sharon Davenport will coordinate volunteers. Fred Eckhardt conducted a beer and chocolate tasting in February.

Dues are \$15 per year, meetings the second Tuesday of the month. Contact Tom Gronke, 1037 NW 20th No. 110, Portland, OR 97209, or

**STOUTS, ALES, LAGERS, PORTERS, BITTERS, PILSNER, OR MEADS  
MAKE THE KIND OF BEER YOU LIKE**

## THE COMPLETE JOY OF HOME BREWING



From America's leading authority on home brewing, Charlie Papazian, comes this definitive, easy-to-follow guide to brewing everything from the lightest lager to the darkest stout.

THE COMPLETE JOY OF HOME BREWING includes a complete home brewer's glossary, a fascinating history of beer, over 50 fantastic recipes—from Cherry Fever Stout to Monkey's Paw Brown Ale, and much, much more!

**THE COMPLETE JOY OF HOME BREWING • Charlie Papazian**  
88369-4 • \$8.95 • 352 Pages

The Hearst Corporation

**"DEALER INQUIRIES INVITED" AVON BOOKS, Room 723AHB**  
105 Madison Ave., New York, NY 10016 Tel: 212-399-1357

# Home Brew's for you!

- Quality Products
- Discounts
- Free Local Delivery



- Low Prices
- Free Advice
- Free New England Mail Order

**Complete Supplies for the Homebrewer.**

Write to: **THE MAD CAPPER**  
P.O. Box 310126 Newington, CT 06131-0126

**or Call: (203) 667-7662**

call (503) 227-3034.

**Southern Oregon Brewers Society (SOBs):** The SOBs are just over a year old, yet some 35 persons have aggregated around homebrewing and the joys of distinctive beer. Several members will take the BJCP examination Sept. 21 in Grants Pass, Ore. The SOBs have beds for those who must come from a distance.

Dues are \$5 yearly, meetings the third Sunday of the month. Contact Hubert Smith, PO Box 150, Selma, OR 97538, or call (503) 597-2142.

## PENNSYLVANIA

**Homebrewers of Philadelphia and Suburbs (HOPS):** Dues are \$15 individual, \$20 household. Contact George Hummel c/o Home Sweet Homebrew, 2008 Sansom St., Philadelphia, PA 19103, or call (215) 569-9469.

**Three Rivers Alliance of Serious Homebrewers (TRASH):** The new officers for 1991-2 are Mark Benson, president; Tim Henigin, vice president; Greg Walz, secretary, and Kathy Benson, treasurer. Plans were discussed for a regional competition featuring only buck and mead.

Dues are \$10 per year plus \$5 per meeting, meetings the first Sunday of the month. Contact Greg Walz, 3327 Allendorf St., Pittsburgh, PA 15204, or call (412) 331-5645.

## RHODE ISLAND

**Brewing Lagers Or Various Intriguing Ales to Extreme Satisfaction (BLOVIATES):** At the last club meeting, members decided to change the name from R.I. Association of Brewers to BLOVIATES, which is defined in the dictionary as one who speaks with great wind. Notice to all R.I. brewers who are not yet BLOVIATES: they know they are out there, so call! They welcome all new (and old) members with open kegs.

Contact Jim Sullivan, 123 Beach Ave., Jamestown, RI 02835, or call (401) 423-3251.

## TENNESSEE

**Bluff City Brewers:** The Bluff City Brewers are busy this summer getting ready for the Mid-South fair. During the 10-day fair more than a million people stroll through the grounds, and the Bluff City Brewers are there. For information on attending the fair or entering the contest, contact them.

Dues are \$20 annually, with meetings the third Thursday of each month. Contact Chuck Skyeck, 761 Beasley, Memphis, TN 38111, or phone 1-800-826-BREW.

**East Tennessee Brewers Guild:** The East Tennessee Brewers Guild serves the brewers of the Knoxville and Oak Ridge areas. Meetings are on the first Tuesday following the first Monday of each month.

Dues are \$7 per year. Contact Dev Joslin, 112 Newcrest Lane, Oak Ridge, TN 37830, or call (615) 482-7591.

## TEXAS

**Cowtown Cappers:** After disappointment at the last Dixie Cup, the club is heartened (not to say amazed!) that in March it took the Bluebonnet trophy away from North Texas for the first time ever, fighting off strong challenge from the Foam Rangers as well.

Dues are \$20 per year, meetings the third Thursday of the month. Contact Fred Jackson, c/o the Winemaker Shop, 5356 W. Vickery, Fort Worth, TX 76107, or call (817) 377-4488.

**North Texas Homebrewers Association:** The NTHBA laments the loss of former president Paul Seaward to San Francisco and newsletter publisher Brad Krohn to Portland. Membership is up to 80 plus. Meetings are on the second

Tuesday of each month, usually at DeFalco's in Olla Podrida. Dues are \$15 per year, and membership privileges include a discount at favorite homebrew shops and bars.

Contact Mike Leonard c/o Wine-Beer Magic of Texas, 13931 N. Central Expressway No. 320, Dallas, TX 75243, or call (214) 234-4411.

## UTAH

**ZZ Hops:** The club is always looking for new faces (and beers) to attend. Future meetings are currently scheduled for June 7, July 12 and Sept. 16.

Dues are \$5 annually. Contact Cory Bailey, 10194 Buttercup Drive, Sandy, UT 84092, or call (801) 572-7884.

## VIRGINIA

**Brewers Association of Northern Virginia (BANOV):** Since forming in November 1990, BANOV has expanded rapidly in the Northern Virginia area. Plans are under way for an extensive social calendar in the coming year highlighted by a trip to the old Dominion Brewery, a Bier und Wurst Fest and a prolific pasta pig-out party.

Dues are \$20 a year, or \$30 for a family membership. Meetings are monthly. Contact Miles D. Smith, 6936 Regent Lane, Falls Church, VA 22042, or call (703) 237-8956.

**Hampton Roads Brewing and Tasting Society:** The club's 40-plus members represent the cities of Virginia Beach, Norfolk, Portsmouth, Chesapeake, Newport News, Hampton and Williamsburg. Elections were held at the March meeting and the new officers are Joe Heil, president; Chris Jones, vice president; Ron Young, treasurer; and Bruce Rader, newsletter editor. Meetings are the first Wednesday of the month.

Contact Ronald R. Young, 2301 Kingsman Lane, Virginia Beach, VA., 23456, (804) 427-5695.

**James River Homebrewers:** Interest in homebrewing in the heart of Virginia continues to grow. The club invites all central Virginia brewers and beer lovers to join the most progressive brewclub in the Southeast. Dues are \$15 per year prorated, newsletter subscriptions are \$9. For information, call the club's 24-hour voicemail service, the BrewsLine at (804) 750-6828.

## WASHINGTON

**The Brews Brothers:** Represented by Jack Hagens, the Brews Brothers won first place in the AHA Hall to Ale competition. Plans are progressing for the Brews Brothers regional homebrew competition near the end of 1991.

Dues are \$12 a year, meetings the second Saturday of the month. Contact John Polstra, 9346 California Drive SW, Seattle, WA 98136, or call (206) 932-6481.

**South King County Homebrewers Club:** The club is in the process of picking a name and other attributes but as yet has no formal officers. This has not dampened the enthusiasm of the members in their quest for companionship and exchange of brewing ideas and recipes.

Dues are \$15 per year, meetings the third Thursday of the month. Contact Larry Rifenberck, 7405 S. 212 No. 103, Kent WA 98032, or phone (206) 872-6848.

## WISCONSIN

**The Bidal Society Homebrewers of Wisconsin:** The club took second place in the club award at Kansas. Brian and Linda North took first place in fruit beer, second in barley wine and second in the "no commercial comparison" category. David Norton took second in wheat beer and second in sweet stout.

Continued on page 68

Supplier of the  
Great Northwest  
for over 35 years !



Now shipping Nationwide  
Complete selection of  
Equipment and supplies for  
Home Brewing & Winemaking  
Full line of malt extracts, grains,  
hops, liquid & dry yeasts

### Quantity Discounts

24 hour Order Line  
We specialize in

### FAST & FRIENDLY Customer Service

Call or write for  
FREE CATALOG

### Jim's Home Brew Supply

N 2619 Division  
Spokane, WA 99207

(509)-328-4850



### Quality Products, Competitive Prices and Personal Service.

We Offer a Complete Selection of Supplies for the  
Beginning and Advanced Homebrewer, including:

90 Malt Extracts and Beer Kits  
25 Grains  
20 Hop Varieties  
Draft Beer Systems  
Pure Yeast Cultures  
200,000 BTU Brewing Stand

~Club Discounts~

Free Descriptive Catalog. 24-Hour Order Line:

1-800-638-2437

The Brewhaus

4955 Ball Camp Pike, Knoxville, TN 37921  
615/523-4615

Ron Downer, Owner & Brewmaster

# The Homebrew Connection

These fine retail shops across North America offer homebrewing ingredients and supplies. Plan to visit them when you are in the area.

## Alabama

**Birmingham Homebrew**  
1917 29th Ave. S.  
Birmingham, AL 35209-2617  
205-871-BEER/800-BUY-MALT

**Pearly Gates**  
2308 Memorial Parkway SW  
Huntsville, AL 35801  
205-534-6233

## Alaska

**Alaska Mill & Feed Co.**  
1501 E. 1st Ave.  
Anchorage, AK 99510  
907-276-6016

## Arizona

**Brewmeisters Supply Co.**  
1924 W. Aster Dr.  
Phoenix, AZ 85029  
602-843-4337

## California

**Barley And Wine Home Fermentation Supply**  
1907 Central Ave.  
Ceres, CA 95307  
209-538-BREW

**Beermakers of America**  
PO Box 777  
Colfax, CA 95713  
916-878-8527/800-655-5682  
(800 number is for CA only)

**Beer Makers of America—San Jose**  
1040 N. 4th St.  
San Jose, CA 95112  
408-288-6647

**The Fermentation Settlement**  
1211 C Kentwood Ave.  
San Jose, CA 95129  
408-973-8970

**Great Fermentations of Marin**  
87M Larkspur  
San Rafael, CA 94901  
415-459-2520/800-542-2520

**Great Fermentations of Santa Rosa**  
840 Piner Rd. #14  
Santa Rosa, CA 95403  
707-544-2520/800-544-1867

**Home Brew Supply**  
6781 Sueno Rd.  
Isla Vista, CA 93117  
805-968-7233

**The Home Brewery**  
775 S. Gifford, Suite 9  
San Bernadino, CA 92408  
714-421-0331

**Napa Fermentation Supplies**  
724 California Blvd.  
Napa, CA 94559  
707-255-6372

**R & R Home Fermentation Supplies**  
8385 Jackson Rd.  
Sacramento, CA 95826  
916-383-7702

## Portable Potables

1011 41st Ave.  
Santa Cruz, CA 95062  
408-476-5444

**St. Patrick's Homebrew**  
106 Hagar Court  
Santa Cruz, CA 95064  
408-459-0178

## Colorado

**The Brew-It Company**  
129 Remington Ave.  
Fort Collins, CO 80524  
800-748-2226

**Liquor Mart Inc.**  
1750 15th St.  
Boulder, CO 80302  
303-449-3374

**North Denver Cellar**  
4370 Tennyson St.  
Denver, CO 80212  
303-433-5998

**Reinheitsgebot Home Brew Supply**  
402 Main  
PO Box 1024  
Lyons, CO 80540  
303-823-5363

## Connecticut

**Crossfire Brewing Supply**  
PO Box 530  
Somersville, CT 06072  
203-623-6537

**The Mad Capper**  
PO Box 310126  
Newington, CT 06131-0126  
203-667-7662

**S. E. C. T. Brewing Supply**  
c/o SIMTAC  
20 Attawan Rd.  
Niantic, CT 06357  
203-739-3609

**Wine Art of Smith-Tompkins**  
1501 E. Main St., Rt. 202  
Torrington, CT 06790  
203-489-7137

## Delaware

**Wine Hobby USA—Delaware**  
2306 W. Newport Pike  
Stanton, DE 19804  
302-998-8303

## Georgia

**Wine Craft of Atlanta**  
3400 Wooddale Drive NE  
Atlanta, GA 30326  
404-266-0793

## Illinois

**Chicago Indoor Garden Supply**  
297 N. Barrington Rd.  
Streamwood, IL 60107  
708-885-8282/800-444-2837

**The Cooper Shop**  
One Vineyard Lane  
PO Box 130  
Monee, IL 60449-0130  
708-534-8790

**Country Food & Liquor**  
19454 S. Route 45  
Mokena, IL 60448  
708-479-2900

**Jantac Cellars**  
PO Box 266  
Palatine, IL 60078  
708-397-7648

**Leisure Time**  
123 S. Mattis  
Country Fair Shopping Center  
Champaign, IL 61821  
217-352-4007

**Lil' Olde Winemaking Shoppe**  
4 S 245 Wiltshire Lane  
Sugar Grove, IL 60554  
708-557-2523

**Old Town Liquors**  
514 S. Illinois Ave.  
Carbondale, IL 62901  
618-457-3513

## Iowa

**Biederman Brewing Supply**  
PO Box 164  
Elkader, IA 52043

**Lena's Liquors**  
1544 Superior St.  
Webster City, IA 50595  
515-832-4042

## Kansas

**Bacchus & Barleycorn Ltd.**  
8725 Johnson Dr.  
Merriam, KS 66202  
913-262-4243

## Kentucky

**Nuts N Stuff, Inc., Bulk Foods**  
2022 Preston St.  
Louisville, KY 40217  
502-634-0508

**Winemakers Supply & Pipe Shop**  
9477 Westport Rd.  
Westport Plaza  
Louisville, KY 40222  
502-425-1692

## Louisiana

**The Beersmith**  
8158 Harry Dr.  
Baton Rouge, LA 70806  
504-924-6544

## Maine

**Maine Homebrew Supply**  
PO Box 202  
Gorham, ME 04038  
207-642-3658/207-773-6858

**The Purple Foot Downeast**  
116 Maine St., Dept. Z  
Waldoboro, ME 04572  
207-832-6286

**R.S.V.P. Discount Beverage & Redemption Center Inc.**  
887 Forest Ave.  
Portland, ME 04103  
207-773-8808

**The Whip & Spoon**  
161 Commercial St.  
PO Box 567  
Portland, ME 04112  
207-774-6262

## Maryland

**Brew Masters Ltd.**  
12266 Wilkins Ave.  
Rockville, MD 20852  
301-984-9557

**The Flying Barrel**  
111 S. Carrol St.  
Fredrick, MD 21701  
301-663-4491

**Terrapin Brewers Association**  
Route 2 Lot 5B  
La Plata, MD 20646  
301-932-1706

## Massachusetts

**Beer And Wine Hobby**  
180 New Boston St.  
Woburn, MA 01801  
617-933-8818/800-523-5423

**Beer Makers Supply**  
441 Neck Rd.  
Lancaster, MA 01523  
508-368-4343

**Feen's Country Living Inc.**  
Twin City Mall  
Leominster, MA 01453  
508-537-4518/800-922-8490

**The Modern Brewer Co.**  
2304 Massachusetts Ave.  
Cambridge, MA 02140  
617-868-5580

**The Village Store**  
999 Maine Rd., PO Box 3051  
Westport, MA 02790  
508-636-2572

**The Vineyard-Home Brewers and Vintners Supply**  
PO Box 80  
Upton, MA 01568  
508-529-6014

**The Witches Brew**  
25 Baker St.  
Foxborough, MA 02035  
508-543-2950

## Michigan

**The Barrel Shop**  
41 Courtland St.  
Rockford, MI 49341  
616-866-3327/800-648-9860

**Diversions Beer and Winemakers Supply**  
140 E. Front St.  
Traverse City, MI 49684  
616-946-6500

## Missouri

**E.C. Kraus Sales**  
PO 7850  
9001 E. 24 Hwy.  
Independence, MO 64054  
816-254-7448

**The Home Brewery**  
PO Box 730  
Ozark, MO 65721-0730  
417-485-0963/800-321-BREW



**IMO Homebrew and  
Meadery Supply**  
PO Box 25485  
St. Louis, MO 63125  
314-487-2130

**St. Louis Wine & Beermaking**  
7352 Manchester, Suite 100  
Maplewood, MO 63143  
314-644-4664

**Winemakers Market**  
4349 N. Essex Ave.  
Springfield, MO 65803  
417-833-4145

**Nebraska**  
**Homebrewing Supply Co.**  
2805 N. 97th Ave.  
Omaha, NE 68134  
402-391-0649

**Nevada**  
**Budgie Myster Home Brew Co.**  
2404 Howard Dr.  
Las Vegas, NV 89104  
702-457-9671

**New Hampshire**  
**The Brewer's Basement**  
PO Box 521  
Dover, NH 03820  
603-749-2198

**Orfordville Home Brew Supplies**  
Rt 25A RR1 Box 106A  
Orford, NH 03777  
603-353-4564

**Salisbury Brewing Supply Co.**  
114 Garvins Falls Rd.  
Concord, NH 03301  
603-224-8270

**New York**  
**Bottom of the Barrel**  
280 E. Dominick  
Rome, NY 13440  
315-339-6744/800-437-3451

**The Brewery**  
11 Market St.  
Potsdam, NY 13676  
315-265-0422/800-762-2560

**East Coast Brewing Supply**  
124 Jacques Ave.  
Staten Island, NY 10306  
718-667-4459/fax987-3942

**Fall Bright**  
9750 Hyatt Hill  
Dundee, NY 14837  
607-292-3995/607-292-6908

**Hennessy Homebrew Inc.**  
470 N. Greenbush Rd.  
Rensselaer, NY 12144  
518-283-7094

**The Homebrewer's Connection**  
198 Smith Rd.  
Spring Valley, NY 10977  
914-425-5560/800-BREW123

**KEDCO-Beer & Wine Making Store**  
564 Smith St.  
Farmingdale, LI, NY 11735-1168  
516-454-7800

**Milan Malt Shoppe**  
RD 1, Box 196  
Red Hook, NY 12571  
914-756-2741

**Milan Wine & Beer Brewing Lab.**  
57 Spring St.  
New York, NY 10012  
212-226-4780/800-BEER-KEG

**Party Creations**  
RD 2 Box 35  
Red Hook, NY 12571  
914-758-0661

**S&R Homebrewing  
& Winemaking Supplies**  
PO Box 544 Union Station  
Endicott, NY 13760  
607-748-1877

**North Carolina**  
**Alternative Beverage**  
114-0 Freeland Lane  
Charlotte, NC 28217  
800-365-BREW

**Oklahoma**  
**Urban Technology**  
2911 W. Wilshire  
Oklahoma City, OK 73116  
405-843-1888/800-356-3771

**Oregon**  
**F.H. Steinbart Co.**  
234 SE 12th St.  
Portland, OR 97214  
503-232-8793

**Home Fermenter Center**  
123 Monroe  
Eugene, OR 97404  
503-485-6238

**Pennsylvania**  
**Ambler Woodstove & Fireplace**  
Butler & Bethlehem Pikes  
Ambler, PA 19002  
215-643-3565

**BREW by YOU**  
3504 Cottman Ave.  
Philadelphia, PA 19149  
215-335-BREW

**Bryant Brewing**  
RD 1, Box 262  
Austin, PA 16720  
814-677-8526

**Country Wines**  
3333 Babcock Blvd.  
Pittsburgh, PA 15237-2421  
412-366-0151

**Home Sweet Homebrew**  
2008 Sansom St.  
Philadelphia, PA 19103  
215-569-9469

**Rhode Island**  
**East Coast Homebrew Supply**  
PO Box 1010  
Mapleville, RI 02839  
401-568-6155

**Hobby Winemakers Supply**  
1270 Post Rd.  
Warwick, RI 02888  
401-461-0780

**Tennessee**  
**Allen Biermakens**  
4111 Martin Mill Pike  
Knoxville, TN 37920  
615-577-2430

**Squash Blossom Market**  
5101 Sanderlin, Suite 124  
Memphis, TN 38117  
901-685-2293/901-324-BREW

**The Winery and Brew Shop**  
60 S. Cooper St.  
Memphis, TN 38104  
901-278-2682

**Texas**  
**Beer & Wine Magic**  
13931 N. Central Expwy,  
Suite 320  
Dallas, TX 75243  
214-234-4411/800-966-4144

**Defalco Wine & House Beer**  
12215 Coit Rd., Suite 232  
Dallas, TX 75248  
214-233-7895

**Utah**  
**Art's Brewing Supplies**  
640 South 250 West  
Salt Lake City, UT 84101  
801-533-8029

**The Straw Ibis**  
52 Federal Ave.  
Logan, UT 84321  
801-753-4777

**Vermont**  
**The Nevin Dubin Homebrew  
Supplier at K and K Beverage**  
1341 Shelborne Rd.  
South Burlington, VT 05403  
802-658-9595/802-877-2318

**Virginia**  
**The Compleat Gourmet Inc.**  
3030 W. Cary St.  
Richmond, VA 23221-3502  
804-353-9606/800-777-9606

**Eats Natural Foods CoOp., Inc.**  
1200 N. Main St.  
Blacksburg, VA 24060  
703-552-2279

**Heartwood Crafts/Brew Supplies**  
PO Box 2501  
Lebanon, VA 24266  
703-889-2741

**Washington**  
**Brewers Warehouse**  
4520 Union Bay Place NE  
Seattle, WA 98105  
206-527-5047

**The Cellar Home Brew**  
14411 Greenwood N.  
Seattle, WA 98133  
206-365-7660/800-342-1871

**Jim's 5¢ Home Brew Supply  
& Traditional Beer Emporium**  
N 2619 Division St.  
Spokane, WA 99207  
509-328-4850

**Liberty Malt Supply Co./  
Pike Place Brewery**  
1432 Western Ave.  
Seattle, WA 98101  
206-622-1880

**West Virginia**  
**Stone's Throw  
at the Mountain Peoples Market**  
1400 University Ave.  
Morgantown, WV 26505  
304-291-6131

**Tent Church Vineyard**  
RD 1, Box 218  
Colliers, WV 26035  
304-527-3916

**Wisconsin**  
**Haupt Barrel & Cooperage Co.**  
1432 S. First St.  
Milwaukee, WI 53204  
414-645-7274

**Hedtke's IGA Market**  
308 Clark St.  
Hatley, WI 54440  
715-446-3262

**Life Tools**  
401 N. Clay St.  
Green Bay, WI 54301  
414-432-7399

**The Malt Shop/  
Kettle Moraine Vineyards**  
N. 3211 Highway S.  
Cascade, WI 53011  
414-528-8697

**Nort's Worts**  
7625 Sheridan Rd.  
Kenosha, WI 53143  
414-654-2211

**Canada**  
**FSJ Brew Haus**  
8221 100 Ave.  
Fort St. John, BC V1VJ 1W7  
Canada  
604-787-2739

**Marcon Filters**  
40 Beverly Hills Dr.  
Downsview, ON M3L 1A1  
Canada  
416-248-8484

**Pacific Coast Vintners and  
Brewers Ltd.**  
3419 Kingsway  
Vancouver, BC V5R 5L3  
Canada  
604-433-8918

If you are interested in having your shop  
listed, please call Linda Starck,  
(303) 447-0816, for all the details.



**THE MALT HOUSE**  
Main Street  
Medaryville  
Indiana 47957  
(219)843-5422  
malt@tater.com

**Quality Comes First**

☛ Our malts and hops are kept in constant cold storage.

☛ Our malts are professionally ground using a roller mill.

☛ Readymash™ grists offer wide selection and convenience.

*Order your malts and hops  
"just in time"*

Call, write or email to get the ball rolling. . . . .

## Want To Go Pro?

*Don't miss the  
Microbrewery Event  
of 1991!*

The National Microbrewers  
and Pubbrewers Conference  
and Trade Show

September 4-7, 1991

Hyatt Regency Hotel  
Buffalo, New York

**Presentations • Trade Show  
Information • Contacts • Beer**

For details contact Jeff Mendel,  
Institute for Brewing  
Studies, PO Box 287,  
Boulder, CO 80306-  
0287. Phone: (303)  
447-0816.



## Continued from page 65

Dues are \$36 per year, or a trial membership for \$13. Meetings are the third Thursday of the month. Contact David Norton, c/o Nort's Worts, 7625 Sheridan Road, Kenosha, WI 53140, or call (414) 654-2211.

**Boars Head Brewing Club:** 1991 will mark the ninth year of the Boars Head Brewing Club. Club members, some of who have been with the club from the start, plan to compare summer ales brewed during the warmer weather. When fall comes, the club will challenge members to brew the most palatable stout for consumption toward the end of next winter.

Contact Jeff Parish, 2321 Trillium Drive, Eau Claire, WI 54707, or call (715) 839-0555.

**The Brewtown Brewmasters:** The March meeting brought their knuckleheads together to vote among 12 fine bocks to represent the club in the AHA's Bock is Best competition. The club voted overwhelmingly to stay with the knuckle-headed loose format of no dues, no officers, no shoes, no shirt, no service.

Contact Mark May, 4280 N. 160th St., Brookfield, WI 53005, or call (414) 781-BREW.

**Central Wisconsin Amateur Wine Club:** The club will start the season on Sept. 12 at the Central State Bank in Marshfield, Wis. Come have a look and listen, and join them if you like it! The club strives for the betterment of wine and beer making through programs, judgments, films and trips to wineries and breweries. They welcome anyone.

Dues are \$10 annually, meetings the second Thursday of the month September through May. Contact Edward R. Holt, 1200 E. 26th St., Marshfield, WI 54449, or call (715) 384-9441.

**King Gambrinus Court of Brewers:** Art Steinhoff recently showed his beers at the Kansas City Biermeisters Competition and took first with his Texas brown ale, plus first and best of show with his pale ale. The club attended the Blessing of the Bock, put on by the Lakefront Brewery in Milwaukee on March 17.

Contact Art Steinhoff, 7680 Big Pine Lane, Burlington, WI 53105, or call (414) 539-2736.

## AUSTRALIA

**Amateur Brewers Association—Victoria:** 1991 started off with a cheese and beer tasting held at Barry Hastings' Brewery during February. A wide range of Dortmund and other German beers together with some delightful Australian cheeses were enjoyed by all assembled.

Contact Barry Hastings, 10 Aston Heath, Glen Waverley, 3150, Australia, or phone (03) 561-4603.

## CANADA

**The Brewnosers:** The Brewnosers are still growing in number and expertise. Recent meetings have included a demonstration brewing night for beginners and experienced homebrewers to share tips and techniques, and brewing contests where look-alike and best-of-class categories received the first-ever Brewnosers club contest prizes.

Meetings are the second Monday of the month. Contact Jeffery Pinhey, 2325 Clifton St., Halifax, NS, Canada, call (902) 425-5218, or use CompuServe ID 74040,3137.

**Campaign for Real Ale (CAMRA):** The Victoria, B.C., chapter of CAMRA held a homebrewing seminar at the Fogg n' Sudds Restaurant in January. The 30 in attendance heard from a variety of speakers on common beer faults and judging, full-mash brewing, improving the standard kit, modifying refrigerators for dispensing draft, U-Brew stores and membership and publications from the AHA.

Contact CAMRA Victoria, 1440 Ocean View Place, Victoria, BC V8P5K7 Canada, or phone (604) 595-7728.

**Edmonton Homebrewers Guild:** By the time you read this, the club will have held an outstanding open competition in June with well over 100 entries. The current executive will dissolve as easily as tears in beer during the September annual general meeting, and a new executive will set off on trembling legs for the next club year.

Dues are \$25 per year. Contact Michael Kelly, 4835 - 151 St., Edmonton, AB, Canada, or call (403) 437-5157.

**Royal Canadian Malted Patrol:** February featured the club's first ever AHA-sanctioned competition, the "Wort You Brewin'?" It attracted 134 entries. The grand prize was airfare to Boulder, Colo., to judge in the first round of the Nationals and attend Homebrew Day festivities.

Contact Betty-Ann Sather, 3419 Kingways, Vancouver, BC V5R5L3, Canada, or call (604) 433-8918.

## JAPAN

**Foreign Fermentations:** The club writes, "Hello, America! It's too hot to brew here due to primitive conditions, although we are soliciting suggestions on how and what to brew at 90 degrees F and above—no air conditioning. We extend a warm invitation to homebrewers everywhere to visit Tokyo and let us be your hosts."

Contact Crayne Horton, Kopo Hiro 105, Kugenuma Tachibana 1-15-5, Fujisawa, T251 Japan, phone 0466-24-2806.

## NEW ZEALAND

**Auckland Guild of Winemakers and Brewers:** Treasurer Howard Ries was awarded Champion beermaker at the River Valley open competition in February for his dry stout, brewed with malt extract, wheat, specialty grains and liquid yeast from Canada.

Dues are \$20/\$24, meetings the fourth Wednesday of the month. Contact Hee Denniston, 426 Sandringham Road, Auckland 3, 868 428.

**Manukau Amateur Winemakers and Apiarists Club:** The membership in the last few years has nearly doubled, in fact, they are in the process of finding rooms suitable for their size. Their main job now is planning to host the northern region of the New Zealand Federation of Home Brewers. The convention will be in Papatoetoe in August-September. All are welcome.

Contact Basil Dempsey, 18 Picton St., Papatoetoe, New Zealand, phone (09) 2785453.

**North Shore Fermenters:** The new committee for the NSF is president, Alf Cameron; editor, Ike Ansin; treasurer, Glen Sullivan; secretary, Stephanie Dron; librarian, Bill Dron; functions organizer, Samantha Dron; and raffle organizer, Greg Barnaby. At their first meeting, resolutions were passed to hold a variety of functions during 1991.

Dues are \$15 single and \$20 double. Meetings are the third Wednesday of the month. Contact Mrs. Ike Ansin, 13 Sundown Ave., Whangaparaoa, New Zealand, or phone 0942-48209.

**Waimea Amateur Winemakers and Brewers Society:** Contact Mrs. Marie Stephens, 4 Churchill Ave., Richmond, Nelson 7002, New Zealand, or phone 47100.

## SWEDEN

**Förjäsningarmén (Fermentation Army):** A new homebrew club has formed in Stockholm. Håken Lundgren and Svante Ekelin are the first (and currently only) members. Membership is expected to increase to 10 very soon. The big event in Sweden is the Swedish National Competition, run by the Swedish Homebrewers Association. *Högskattingsfullt!*

Contact the Fermentation Army c/o Svante Ekelin, Humlegården, S-186 96 Vallentuna, Sweden, telephone (762) 35515.

# CLASSIFIED

**Deadlines: Spring—December 15, Summer—March 20, Fall—June 7, Special Issue—August 16, Winter—September 20. Pre-payment required. Please specify in which issue(s) your ad is to run. Call Linda Starch, Advertising Manager, at (303) 447-0816 for options and rates.**

## INGREDIENTS

Extensive stock of grains, hops, yeast and supplies at the right price. FREE catalog. Frozen Wort, POB 947, Greenfield, MA 01302-0947. Tel: 413-773-5920.

**MAKE QUALITY BEERS!** Free catalog and guidebook. Low prices, fastest service guaranteed. Reliable. Freshest hops, grains, yeast, extracts. Full line equipment. The Cellar, Dept. AZ, PO Box 33525, Seattle, WA 98133. (206) 365-7660, 1-800-342-1871.

**BAVARIAN CRYSTAL MALT**—Light and Dark. Large selection of hops, malt extracts & grains. Bulk light and dark syrups for the brewer on a budget. Since 1971. Call (713) 523-8154 or write for Free Catalog: DeFalco's Home Beer Supplies, 5611 Morningside Dr-Z, Houston, TX 77005.

**ADVANCED BREWERS BUY DIRECT**—Brewery-grade malt, rice and wheat extracts. Fifteen different hops. Liquid yeast cultures. Quantity discounts. American Brewmaster, 2940-6Z Trawick Road, Raleigh, NC 27604. (919) 850-0095.

**BEER AND WINE MAKERS**—request free catalog, fast reliable service. Large selection of malt, hops and concentrate. The Purple Foot, 3167 S. 92nd St., Dept. Z, Milwaukee, WI 53227. (414) 327-2130.

**BREW MORE FOR LOTS LESS FREE CATALOG—GRAINS, EXTRACTS, YEASTS, 18 DIFFERENT HOPS, EQUIPMENT—BRYANT BREWING, RD1, BOX 262, AUSTIN, PA 16720.**

## NO BRAG, JUST FACT!!

We are the lowest priced supplier of brewing ingredients in the midwest. Bulk sales only.

**Brew for Le\$\$ (Chicago)**  
1-800-347-3011

18 Munton & Fison Beer kits export Pilsner Old Ale Australian Draft & Lager Etc. 8.95 + 3.95 P&H, 1.00 P&H additional per can. Home Winery Supply, Dundee, MI 48131.

## Raw Hop Flowers

9 varieties of the Pacific N.W. finest. Free Catalog. FRESHOPS, 36180 Kings Valley, Philomath, OR 97370. 503-929-2736.

## Non-Liquid Assets

Our gelatin yeast cultures differ from the popular liquid cultures in two big ways. One culture lasts a full brewing season & the average cost is 15¢/Brew. For more information contact: Stew's Brew, RR 4 Box 243, River Falls, WI 54022. (715) 425-2424.

## THE HOMEBREWERS' STORE 1-800-TAP-BREW

### ENGLISH ALE KIT \$15.95

6lbs. Telford's (imported) unhopped amber malt extract syrup, Three 1-Oz. pkgs. Hops (pellets), an English Ale LIQUID yeast culture, complete instructions, AND SHIPPING! Checking or Money Order to: THE HOMEBREWERS' STORE, PO Box 82736 Kenmore, WA 98028.

### FRESH HOPS ALL YEAR!

Whole hop "plugs" imported varieties vacuum packed. 5-oz \$6.99. Unique homebrew kegs. Mid-South Malts, 2537 Broad, Memphis, TN 38112. 1-800-826-BREW.

### BEER & WINE MAGIC

Complete line of ingredients. Supplies for beginner to advanced brewer. Three gallon cornelius - \$39.95. 13931 N. Central Expy #320, Dallas, TX 75243. FREE CATALOG 1-800-966-4144.

## SUPPLIES

**WRITE FOR FREE CATALOG** of brewing supplies. Home Sweet Homebrew, 2008 Sansom St., Philadelphia, PA 19103.

Service Selection  
Satisfaction Savings

## FREE CATALOG

Alternative Beverage  
800-365-BREW

**SERIOUS BREWERS** in Midwest take note—lowest bulk prices on varietal extracts, malts and hops. Free catalog. Green Acres, 216 Vork Road, Esko, MN 55733. (218) 879-2465.

**BOTTLE CAPS**—Seven gross—\$7.50 post-paid. Hayes' Homebrewing Supply, 208-A W Hamilton Ave. #17, State College, PA 16801.

**BEERMAKERS—WINEMAKERS**—Free Illustrated Catalog—Fast Service—Large Selection—Kraus, Box 7850-Z, Independence, MO 64053. (816) 254-0242.

## RYE MALT

*Try something different!*

We have the nearly impossible to find RYE malt. The MALT SHOP had a ton of RYE malt made exclusively for us. Only \$1.09/lb. or \$43.60/50lbs

\*\*\*\*\*

Check out the low prices on our American made malts & extracts

\*\*\*\*\*

### SUMMER HOP SALE

Cascade pellets...1 lb.....\$7.50  
Cluster pellets.....1 lb.....\$7.50  
Hallertau pellets..1 lb.....\$9.95  
ALL WYEAST.....\$3.50 each

### THE MALT SHOP

N 3211 Hwy S, Cascade, WI 53011

Call for our free catalog  
1 (800) 235 0026

# CLASSIFIED

continued from page 69

## BEER AND WINEMAKERS

For free catalog call (612) 522-0500. Semplex, Box 11476Z, Minneapolis, MN 55411.

## WILLIAM'S BREWING

features an extensive selection of unique supplies including: home breweries, draft systems, all-malt brewing kits, temperature controllers, bottling aids, and our own line of fresh malt extracts and liquid yeast. Free 32-page Catalog/Newsletter. William's Brewing, Box 2195-Y9, San Leandro, CA 94577. (415) 895-2739.

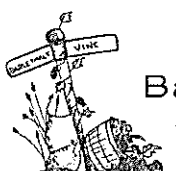
## BREWERS AND WINEMAKERS—

large selection, low prices, prompt service. Free catalog, S & R Homebrewing and Winemaking, PO Box 544, Union Station, Endicott, NY 13760. (607) 748-1877.

**FREE CATALOG!**  
**SEBASTIAN BREWERS SUPPLY**  
7710 91st Ave.  
Vero Beach, Florida 32967  
1-407-589-6563

**BEERMAKERS—WINEMAKERS**  
free catalog - 145 malts. Winemaking Shoppe, 4 S 245 Wiltshire Lane, Sugar Grove, IL 60554. (708) 557-2523.

TBA - New beer/wine making supply company. One day we'll be your supplier. Send for free catalog. TERRAPIN BREWERS ASSOCIATION, ROUTE 2 LOT5B, LAPLATA, MD 20646.



## Barleymalt & Vine

*New England's Best Selection Of  
Brewing Supplies*

- \* Full Service Retail Outlet
  - \* Free Mail Order Catalog
  - \* Free Freight (orders over \$30)
- 1-800-666-7026

4 Corey St., W. Roxbury, MA. 02132  
24 Hour Mail Order Line (617) 327-0089

*Information Is The Most Important  
Ingredient*

## BEERMAKERS WINEMAKERS

Free catalog. Large selection malt extracts, grains, fresh hop flowers compressed into 1/2 oz. discs. Yeast Bank™, equipment, accessories. Country Wines, 3333y Babcock Blvd., Pittsburgh, PA 15237.

## THE BEVERAGE PEOPLE

We wrote the book on homebrewing. Free Catalog. Free Newsletters. Discounts on quantity supplies from America's most respected dealer. Great Fermentations of Santa Rosa. See our ad, pg. 25.

The search stops here for homebrew supplies. Over 750 items available 10% discount with first order - fast shipments - satisfaction guaranteed. Call 800-345-CORK, 3118 US 12 E., Niles, MI 49120 for free catalog.

## SOUTHWEST CAP & CORK

CONNECTICUT may not have a lot going for it—but now it has great brewing supplies at great prices! Write or call: S.E.C.T. Brewing Supply, c/o SIMTAC, 20 Attawan Rd., Niantic, CT 06357. (203) 739-3609. M-F 8-5.

## FREE HOPS

WITH EVERY ORDER. HUGE SELECTION OF EQUIPMENT & SUPPLIES - BEST PRICES! FREE CATALOG/NEWSLETTER. KANE'S BREWHAUS, 105 E. 4TH ST., TROY, ID 83871-0516. (208) 835-5263.

## 10% off first order! Lowest prices around!

For free catalog write: Make Your Own Beer! Suite 123-Z, 4215 Winnetka Ave N, New Hope, MN 55428.

Please Help! New homebrew shop. Free Catalog. St. Patrick's Homebrew, 106 Hagar Court, Santa Cruz, CA 95064, 408-459-0178.

## EQUIPMENT

**Thermostat Controlled Refrigeration Kit.** Brew better beer & prevent off-flavors that fermenting by varying temperatures create. Easy to install, 40° to 90° F, illustrated instructions, write for brochure or send \$130 for kit to Wolf, 12239 Westlock Dr., Tomball, Tx. 77375. Order in Tx. add \$10. Custom orders welcome.

**WOOD BEER CASES** - Tired of keeping your beer bottles in boxes/6-pack holders? With our easy to follow, illustrated plans & a few hand tools you can have a sturdy wood beer case. Send \$8.95 to: ARCTIC SAWDUST MFG. CO., PO Box 671123, Chugiak, Alaska 99567.

## 15.5 Gal. Brew Kettle

Made from keg \$65. Also available, custom SS plumbing + thermometer. Use for mash/lauder tun or sparge. For more information - Write Kettle, 1507 NE 76 St., Seattle, WA 98115.

Wort chillers \$22 standard custom sizes available. 303-467-3219. Rob Nelson, works great!

## SPECIFIC GRAVITY CORRECTION CHART

A high quality and easy to use guide for obtaining the proper correction value for hydrometer measurements at any temperature. 8 1/2 x 11 and suitable for framing. Satisfaction Guaranteed. Send \$3.00 to: Yukov Company, Box 114E, R.D. #2, Windber, PA 15963

## MEAD

MEADMAKERS: Send \$1.00 for FREE price list and Mead recipe. Gyoparka's Honey Shoppe, Box 185, Geneseo, IL 61254

**IMO Homebrew and Meadery Supply** is the place for all your ZYMOTICAL needs. Honey, herbs, spices, dried flowers, recipes. 50# 2-row Malted Barley \$29 + UPS 33 Qt. Enamel N+Brewpot \$29 UPS paid IMOHMS, PO Box 25485, St. Louis, MO 63125.

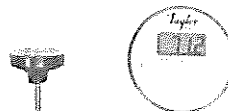
## MAKING MEAD?

Use mesquite honey - 12 lbs \$9 - 24 lbs \$16 - Plus UPS - Chaparral Corp. 1655 W Ajo #154, Tucson, AZ 85713.

## BOOKS, ETC.

**WORLD BEER REVIEW**—newsletter for the beer gourmet and enthusiast. Request free copy or subscribe now for only \$16.50. WBR, Box 71A, Clemson, SC 29633.

## DIGITAL THERMOMETERS



1" DIA, FACE  
4 1/2" S.S. PROBE  
1° RESOLUTION  
REPLACEABLE BATTERY  
0-160°F #6825  
68-220°F #6830

Either one \$21.75 + \$2.50 P & H  
Any two \$39.95 + \$2.50 P & H

**AMERICAN BREWMASTER**  
2940-6 TRAWICK RD.  
RALEIGH, NC 27604  
919-850-0095

## PROFESSIONAL OPPORTUNITIES

Brewer wanted/part time for new Brew-pub in Regina. Experience helpful but will train. Call (416) 440-4290.

## DRAFT & BOTTLING SYSTEMS

### STAINLESS DRAFT SYSTEMS

Excellent condition used 5 gallon pinlock soda keg with new 2 gauge CO<sub>2</sub> regulator, all fittings, tap hose, and hand faucet only \$150; kegs alone \$35 ea. Prices include shipping to continental US. Black Mountain Homebrew Supply. (619) 375-0192.

**BREWER'S CATALOG.** Stainless-steel draft systems, all-malt kits, fresh quality supplies. Koeppl's Master Brewer, 2311 George St., Rolling Meadows, IL 60008.

### DRAFT SYSTEMS, CTSP

#### Filters, Bottle Fillers

Everything for complete homebrewer: SS systems, books, parts. Braukunst, PO Box 786-Z, Duluth, MN 55801.

## APPAREL

### Maine Homebrew Supply

Free Catalog. Full line of supplies and ingredients. Lowest prices, Hop plugs, liquid yeasts, T-shirts, pub paraphernalia. We do not charge for handling. Club discounts. Visa/MC. PO Box 202, Gorham, Maine 04038. (207) 642-3658 or (207) 773-6858.

## MISCELLANEOUS

### Brewing Brewsacks

Self-contained Brewing System that works! Just add water—make 400 ozs. great Lager or Traditional Bitter. \$28.95 + applic. tax & \$2.50 P & H. Buckeye Brewer's Supply, POB 24147, Dayton, OH 45424, MC & VISA accepted.

1-800-933-8492

### THE HOMEBREWERS' STORE 1-800-TAP-BREW

Beef Jerky: Goes great with homebrew! How to select, prepare, marinate, and smoke homemade beef jerky. Send \$5.00 to Wayne, Box 275, Jamestown, RI 02835.

**CUSTOM LABELS** for homemade beer & wine. Thousands of graphics, borders, 50 type styles. \$2.00 for catalog. Computer Graphic Labels, 6822 Spickard Dr., Huntington Beach, CA 92647.

# FREE FROM THE AHA!

Circle only the items you want.

### How-tos

942 How to Teach a Homebrew Class\*

943 How to Start a Homebrew Club

944 Editorial and Photo Guidelines for submissions to *zymurgy*

946 Outline for Intermediate Brewing

\* Contact the AHA for free informative handouts for your students. (303) 447-0816

### Lists

937 Additives allowed in beers commercially brewed in the U.S.

939 Homebrew clubs in Canada, New Zealand, Australia and the U.S.

940 Beer-related magazines, newspapers, journals, newsletters

941 Micros and brewpubs in the United States with city and state

### Especially for the Beginner

945 How to Brew Your First Batch of Beer

947 How to Use Specialty Malts, with Malt Extract Conversions

948 The zymurgist's Guide to Hops

### General Information

931 An Introduction to the American Homebrewers Association

932 *zymurgy* Mini-Index 1978-1990

933 *The New Brewer* magazine Index 1983-1990

934 The Beer Enthusiast Catalog

*A catalog of beer books, T-shirts, glassware and fun things.*

935 Introductory CompuServe Information Service kit (members only)

*Includes free subscription and \$15 worth of time on the AHA's beer forums.*

936 Application and info for the AHA's Sanctioned Competition Program

bjc The Beer Judge Certification Program Booklet

## HERE'S HOW TO OBTAIN THE ABOVE INFORMATION:

• AHA members: It's all free to you but you must enclose \$2.00 to cover postage and handling costs. P & H is free if merchandise is ordered at the same time. Circle only those items you want.

• Nonmembers of the AHA: Please send for our catalog and information on the AHA.

Name \_\_\_\_\_ Phone \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State/Province \_\_\_\_\_

Zip/Postal Code \_\_\_\_\_ Country \_\_\_\_\_

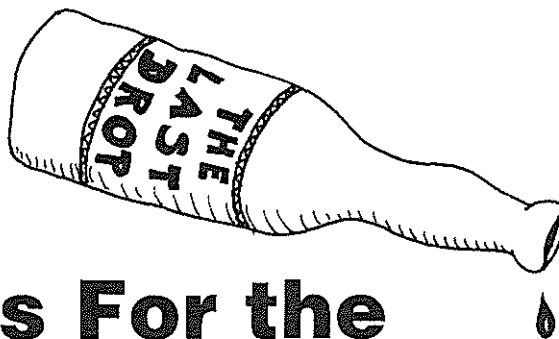
## ALSO AVAILABLE FROM THE AHA

**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 for postage and handling.

☐ Please send me the Beginner's Package. Enclosed is a check for \$2.

American Homebrewers Association, PO Box 287, Boulder, CO 80306-0287. (303) 447-0816, FAX (303) 447-2825.

14-2



## Tips For the Aspiring Beer Snob

**R**emember when beer was something you drank to look stupid? Beer was just an excuse and since everybody drank the same bland, canned excuse, it didn't matter what it was called. Beer was a means to an end. Beer was there to enable you to dance or flirt (or vomit) or do anything you felt almost capable of doing ordinarily.

The Microbrew Revolution has changed the way we drink beer. Instead of drinking it to get somewhere (i.e. drunk) and then forgetting it, beer now requires constant attention.

For example, walk into a pub that has 179 taps and try asking the bartender for a "draft." Drinking beer is suddenly very complicated. There are so many weird things it's hard to know what to order.

The sad thing is, the trouble only begins when you buy a beer. After you buy it you have to talk about it! And it's not like you can get away with vague generalizations like "This beer is good" or "I'm wasted" anymore, because some 97-pound weakling with a hydrometer in his breast pocket is going to make you look like an idiot in front of your date. To look cool in today's beer environment you need to know the key words and phrases that all the beer experts use.

**"Hoppy"**—This is the greatest and most flexible of all beer words. Go to a bar that has 179 taps. Close your eyes and spin in circles. Stop and point to the first beer you can see clearly. Order it. Take one sip and declare. "It tastes kind of hoppy." No one will disagree. Everyone will think you know a lot about beer.

**"Complex"**—Is one of the most elusive of beer words. More ethereal than "hoppy," it bestows the highest possible honor on a beer despite widespread disagreement about what it means. I assume it is the opposite of "simple" but I'm not sure what "simple" beer tastes like. Suffice it to say that "complex" is even more impressive than hoppy and should only be used when no other adjective is possible.

**"Quite Nice"**—When in despair you can always fall back on this simple understatement. It sounds vaguely British and implies you really know more than you're letting on.

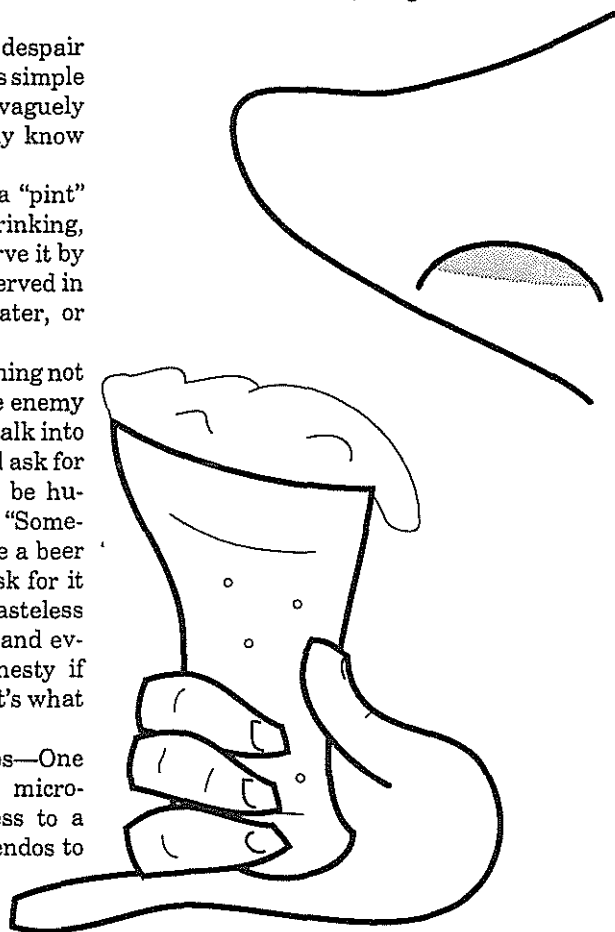
**"Pint"**—Always ask for a "pint" of beer whenever you are drinking, even if you know they only serve it by the thimble. All cool beer is served in "pints." "Glasses" are for water, or worse.

**"Light"**—An important thing not to say! The word "light" is the enemy of all good beer. People who walk into sophisticated beer parlors and ask for a "light" beer are begging to be humiliated. The proper term is "Something Mild." If you must have a beer that is truly without taste, ask for it directly. There are plenty of tasteless microbrewed beers out there and everyone will respect your honesty if you just come out and say that's what you want.

**Various Sexual Innuendos**—One of the benefits of your new microbrewed literacy is your access to a huge pile of new sexual innuendos to

use. Next time you are in a brewery or a public house, invite your date to go home and "hop the wort," or "sparge the grist." If anyone asks what these phrases actually mean, just wink. No one cares what they really mean. They sound dirty and that's all that counts.

*Reprinted from Beer Dreams, the Beer Brewers of Central Connecticut. Written by Richard Leider, Cascade Beer News, Oregon.*





# SIMPLY THE BEST BOOKS ON BREWING

From Brewers  
Publications

*For Enthusiasts with a  
Passion for Quality Beer*

## THE CLASSIC BEER STYLE SERIES,

a continuing  
collection of  
books written by  
industry experts,  
includes *Pale Ale*,  
*Continental Pilsener*  
and *Lambic*.

History,  
techniques,  
ingredients  
and examples  
unravel the  
mysteries of  
these classic styles.

The Brewers Publications booklist includes the annual *Brewers Resource Directory* — a comprehensive collection of data and information on all beers and breweries in the U.S. and Canada, *Brewing Lager Beer* — an all-grain brewing reference for home- and microbrewers and *Principles of Brewing Science* — a brewer's course in chemical and biochemical brewing processes.

The annual *Brewery Operations* and *Beer and Brewing* series — volumes of practical brewing and operational tips for home-, micro- and pubbrewers — completes the Brewers Publications library. Putting the most comprehensive information available *anywhere* right into your hands.

Brewers Publications produces a variety of books for the amateur and commercial brewer. Feed your passions and improve your beer by adding Brewers Publications books to your library.

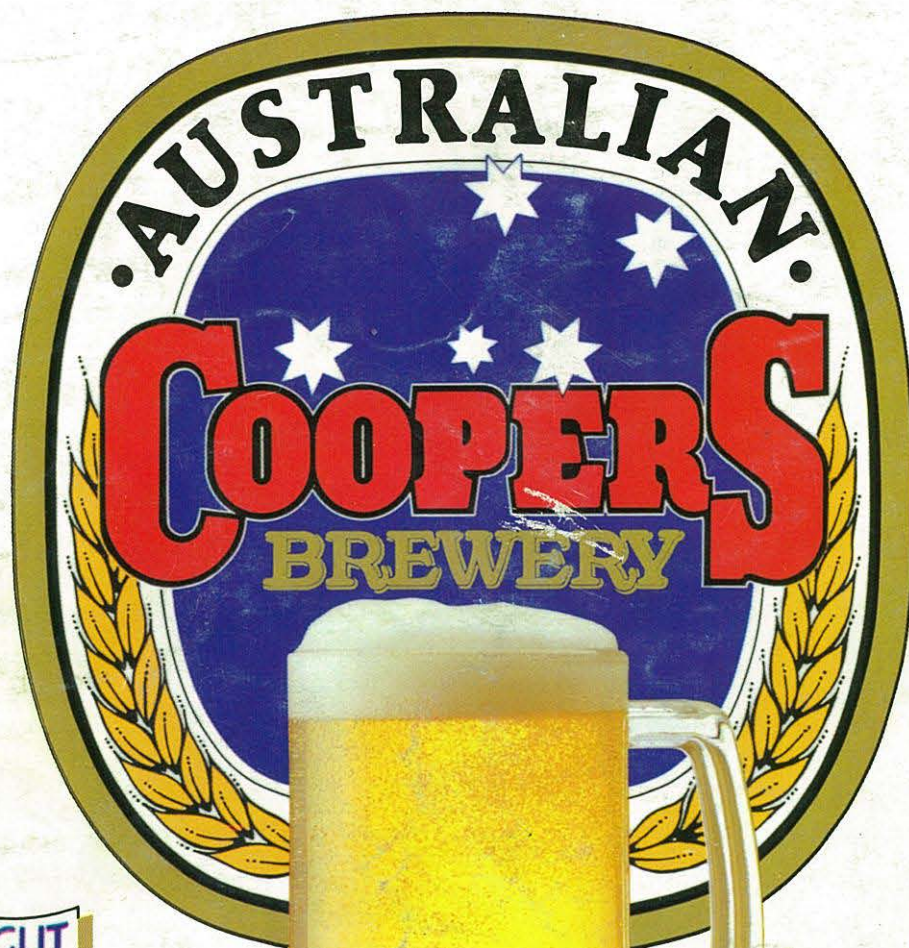
To order or request a catalogue, contact:

Brewers Publications, PO Box 287, Boulder, CO 80306-0287 USA

Tel. (303) 447-0816 FAX (303) 447-2825



# Take a Close Look at Real Taste



- Simple brewing method.
- Top quality flavour.
- Great Value

Cooper & Sons Ltd., a five-star Australian brewery, with over 125 years brewing experience.

*For the wholesaler nearest to you, call*

**1-800-368-9363**