

FOR THE HOMEBREWER AND BEER LOVER

Zymurgy

Vol. 15, No. 1
Spring 1992

Published by the American Homebrewers Association

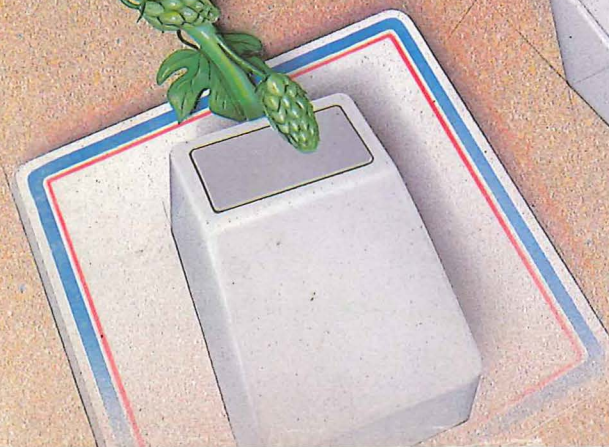
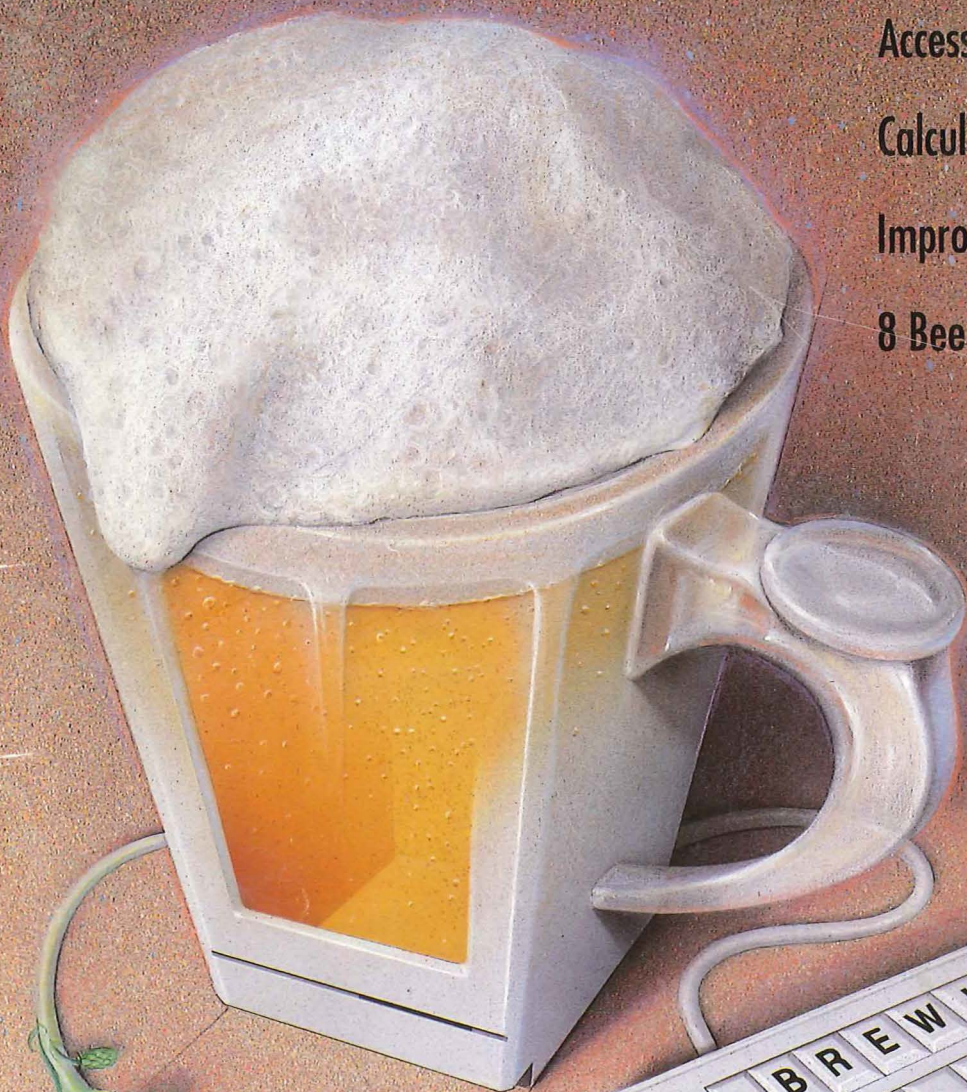
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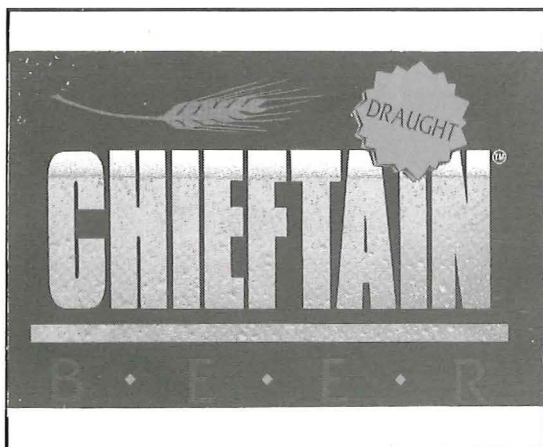
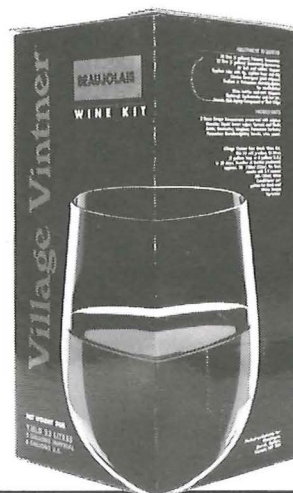
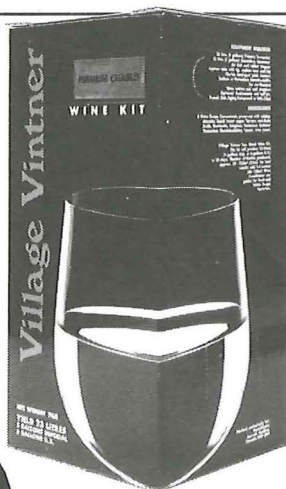
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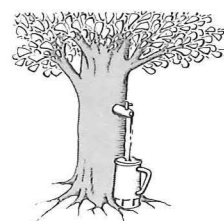
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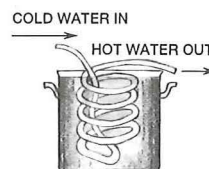
INSERT 14th Annual AHA National Conference *Just Brew It!*



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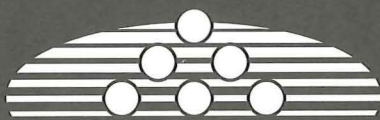
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ISSN 0106-5921

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THE AMERICAN HOMEBREWERS ASSOCIATION MISSION STATEMENT

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.

Printing by EBSCO Media, Birmingham, Alabama.

EDITORIAL

CHARLIE PAPA ZIAN

Who is Harris Faberman?



A new malting barley strain suited for specialty beers? An experimental hop? A yeast researcher? I couldn't help chuckle at last year's National Homebrewers Conference in Manchester, N.H., when an anonymously cryptic note tacked to the bulletin board asked: "Who is Harris Faberman?" I know who Harris Faberman is, and now that I have paused to consider the question, I believe there's reason for others to know who Harris Faberman is.

His name has appeared in *zymurgy* for eight years. Harris is a real estate broker. In addition you might like to know Stuart Kingsbery is a tax attorney, Chuck Kirkpatrick a doctor and cancer researcher, Charlie Matzen an investment consultant and real estate broker, and Loran Richardson is an electrical engineer and computer hardware designer. As members of the all-volunteer Association of Brewers Board of Directors they meet monthly to review, consult and approve the activities and monitor the "health" of the non-profit corporation and its four principal divisions: American Homebrewers Association, Institute for Brewing Studies, Brewers Publications and Great American Beer Festival.

As one of the four principal divisions, the AHA serves to fulfill the mission of the Association of Brewers. It specializes in providing beer and brewing-related educational and informational material and activities to homebrewers and those interested in homebrewing and beer appreciation. While a subscription to *zymurgy* may be considered the primary benefit of membership in the AHA, it is worthy of note that your contributions and membership support go beyond the pages of the magazine.

Here are a few activities in which the AHA is involved: (1) National Homebrewers Conference, (2) National Homebrew Competition, (3) National Beer Judge Certification Program, (4) AHA Sanctioned Competition Program, (5) international homebrew club network, (6) staff support of an international beer-related computer information service (Beer Forum on CompuServe), (7) representing homebrewers and brewing enthusiasts as a resource for international, national and regional media, (8) providing research and information for the publication of books, public and industry presentations relating to beer, (9) providing grassroots support and information for the responsible use of beer as an alcoholic beverage and (10) presenting and supporting beer-related conventions and regional activities.

AHA Vice President Karen Barela and Assistant James Spence are dedicated full time to fulfilling the AHA mission. Sixteen more full-time and six part-time employees of the Association of Brewers dedicate part or, in some cases, all of their responsibilities to magazine production, marketing and essential operations of the AHA and the three other AOB divisions.

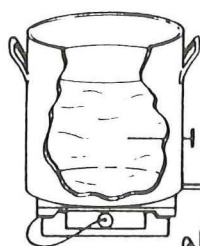
We all share the same office. We all have the same goals at the Association of Brewers. Some manage and assist divisions such as the Institute for Brewing Studies (specializing in the beer and brewing interests of commercial microbreweries and pubbrewers), Great American Beer Festival (which creates a special forum for brewers, beer enthusiasts and especially for the American beer consumer and general public) and Brewers Publications (specializing in the publication of books for those interested in learning about beer and brewing).

Others of us are involved in accounting, circulation, merchandise order filling, customer service, marketing, sales, graphics and production. We work together as employees of an association whose services obviously must be offered to its members and, not so obviously, to the general public. We are a publicly supported, charitable not-for-profit organization under a special type of tax-exempt status granted by the Internal Revenue Service.

We are not a "trade" association, nor do we exist exclusively for the best interests of a particular industry; rather, we are an educational and informational organization. Our activities are directed to serve the best interests of beer and brewing and responsible use of the product.

The American Homebrewers Association finds itself uniquely integrated within a company whose other divisions complement one another. While each division uniquely and primarily serves specialized beer interests, they enhance one another to the benefit of all members and the public.

So that's who Harris Faberman is and who we are. He and other members of the Association of Brewers Board of Directors have the responsibility of making sure the organization's assets and resources are dedicated to fulfilling its mission. Some of them enjoy beer, some are not homebrewers. All share an interest in the future of the Association of Brewers, so the organization will continue to promote a responsible approach to beer education and enjoyment.



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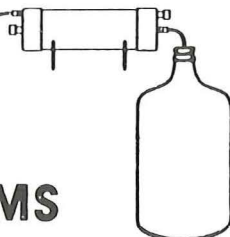
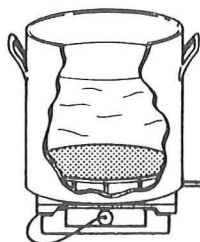
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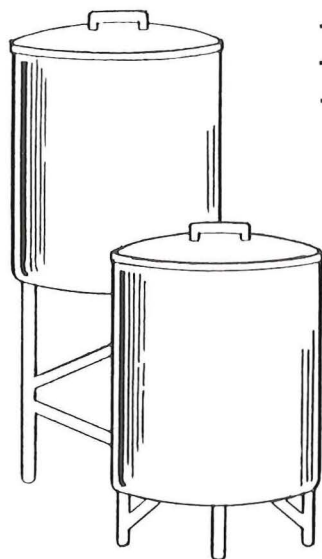
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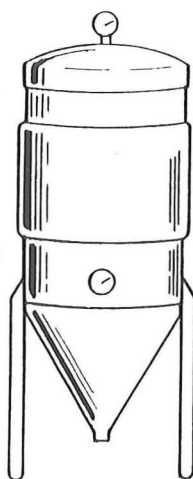
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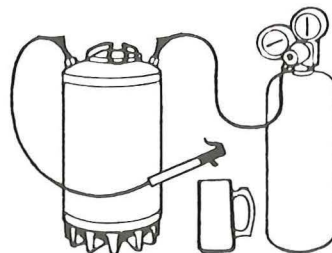
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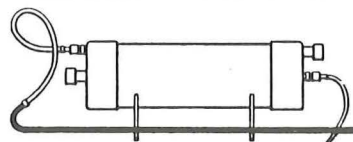
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DEAR ZYMURGY

OUR READERS

Sterilize vs. Sanitize

Dear *zymurgy*,

Thanks to Quentin Smith for sharing his admirable sanitation regimen in *zymurgy* Fall 1991 (Vol. 14, No. 3). I only quibble with his downplaying the semantic difference between "sterilize" and "sanitize."

My dictionary defines "sanitary" as "clean; hygienic," while "sterile" means "free of bacteria and microorganisms." It's a matter of degree: true sterilization is generally beyond the scope of homebrewing technology. For example, sterile filtration and sterile bottling are relatively expensive procedures used by commercial wineries and breweries to arrest fermentation and assure product stability. We homebrewers settle for sanitary bottling and depend on residual yeast to out-compete any remaining bad bugs.

Occasionally, sterility is essential to the homebrewer, as in yeast culturing or storage of unfermented wort. In such cases, heat is the only reliable sterilizing agent. But usually, to our eternal relief, a sanitary environment is good enough. Heck, I'd rather be clean and hygienic than sterile any day!

Erin McClary
Carson City, Nevada

Muchas Gracias

Dear *zymurgy*,

To the *zymurgy* staff, a few words of immense gratitude for your contributions to better brewing. I trust you don't underestimate the extent to which the magazine both emboldens people to get better but also supplies them with solid information to help them get there.

This is too brief a note and certainly long overdue but, all that aside, I stand in awe of what you accomplish and wish you well!

Hubert Smith
Selma, Oregon

A Homebrewer's Nightmare

Dear *zymurgy*,

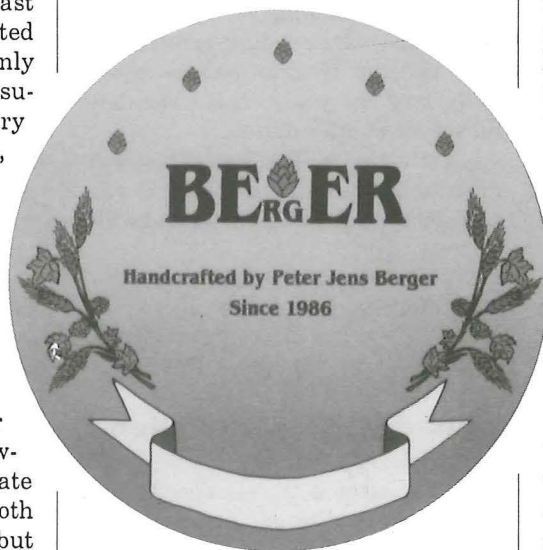
After 20 years of home fermenting one of my biggest fears came true. I dropped a full carboy. This happened late one night in my basement, after I had pressed a couple bushels of grapes, filling the carboy with four gallons of future wine. As I had done 100 times in the past, I attached a carboy handle to the neck of the bottle and carried it about 25 feet. About one foot from its destination the car-

boy slipped off the handle and fell 10 inches to the concrete floor where it smashed to bits with glass and grape juice flowing every direction for about 15 feet.

At first I just stared at this spectacle not believing what I was seeing. My first thoughts were, "What an incredible mess!" Slowly I began to pick up the large hunks of broken glass as I sloshed through the grape juice. I then noticed there were two colors on the floor: purple from grape and red from my bleeding foot.

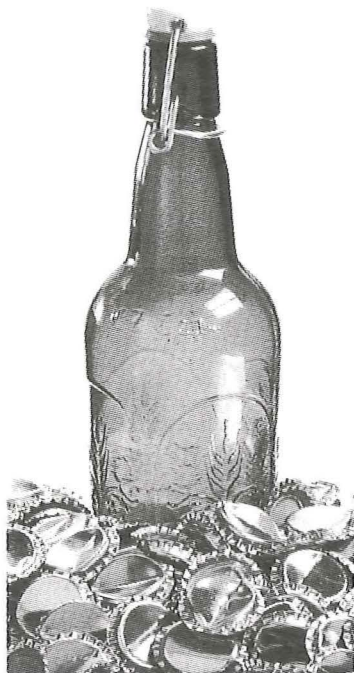
The question is why did this happen and could it have been prevented? I am still not sure why the carboy handle slipped off, but it is probably because I did not attach it properly. It was late at night and I was getting tired and perhaps careless. However, I have learned from this incident and now take the following precautions to make sure that I will not drop any more bottles. I still use the carboy handle, but no longer depend upon it solely. I use it to lift the carboy into a wooden crate and then the crated carboy is rolled to its destination with a handcart. If all the wooden crates are occupied I attach the carboy to the handcart with a strap or bungee cord. I also try not to work past my tiredness level. I make sure that I am wearing shoes and not sandals. It is wise to keep your hands dry or wear gloves to prevent slippage. These are useful precautions to take when handling breakable objects — a broken carboy is a very sad sight to see.

Ralph Bucca
Huntington, Maryland



Label by Peter Jens Berger, West Linn, Ore.

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Gorilla Barley Wine

Dear Kurt Denke,

I read with interest your article in *zymurgy* Fall 1991 (Vol. 14, No.3) and must say that in principle I agree with you wholeheartedly that in every beer there is a gorilla beer waiting to get out. Although I am not sure that I go along with the suggestion of monkey business. There is no doubt that with minimal knowledge readily available from reading *zymurgy* and an ounce of inspiration and desire almost anybody can produce a "giant" of a beer from a standard beer kit. If your porter drinks as good as it sounds, it's a winner. More power to your elbow, please keep spreading the gospel.

We have one kit that I would welcome your putting to the test straight as it comes and then, if you feel inclined, taking it a little further up the road. This is our barley wine. The general consensus is that it could warm the cockles of even the coldest heart. I shall send a parcel to you.

Alan Bowles

Paines Malt Limited

St. Neots, Cambridgeshire, England

Dear Mr. Bowles,

Barley wine, good cockle-warming stuff, indeed. I eagerly await your parcel. Thanks for your input.

Kurt Denke

Good Beer and New Friends

Dear *zymurgy*,

I enjoy reading your magazine very much. By reading *zymurgy* I have drastically improved my beers in the past few years. It is a wonderful source of information.

I attended my first homebrew club meeting in Oakland, Calif., and was amazed by their friendliness and willingness to help.

Thanks again for all of your valuable information over the years.

Steve Jordan

Oakland, California

Mead Made with Pollen

Dear *zymurgy*,

This letter is in reference to the article on traditional mead in *zymurgy* Fall 1991 (Vol. 14, No. 3) to show that traditional mead runs along the same lines as traditional beekeep-

ing. Today the removable frames are an important part of beekeeping. Being an apiarist I know that hives can be managed and inspected and the honey can be extracted from the wax much easier. In the modern beehive the bees usually are managed for wintering through, but in the early days of European beekeeping the straw skep was used. The honey and wax combs were used for candles, the brood with the pollen and young was used for mead — the whole hive insides were cleaned out and used. The pollen was a natural nutrient needed to make mead. Though bees are sometimes fed soybean flour as pollen substitute (I believe it acts as a yeast nutrient). Pollen can be used as a yeast nutrient in "traditional meads."

I would like to refer to an article from *Gleanings in Bee Culture*, September 1991, by Robert Berthold, "A New and Better Way — Make Mead." It starts with "This year try making mead, but use pollen instead of chemical additives. You'll be pleasantly surprised with the results."

I hope this information assists your future efforts.

Mark S. Elliott

Gallup, New Mexico

Making Beer in South Africa

Dear *zymurgy*,

I was looking through some old copies of the *UK Amateur Winemaker and Homebrewer* and came across an article by Charlie Papazian titled "All-American Brews" (June 1986). It struck me that homebrewing conditions in the United States could be similar to South African conditions with both our climates being somewhat warmer than in the U.K., where most of our brewing literature originates. Climatic conditions here generally allow a rapid primary fermentation (two days in summer) when the greatest drop in gravity takes place. I generally transfer the wort to another container and to a cooler spot to allow secondary fermentation and clearing to continue for about one week before bottling.

Although I have been brewing for 10 years I have yet to meet another homebrewer in South Africa. This is not surprising if you consider that I

live in a fairly small town with no organized fraternity of homebrewers. There are two suppliers of brewing and winemaking products, both based in Johannesburg, who have been in business ever since I took an interest in the hobby so I presume there are plenty of us out there who have never set eyes on each other. Fortunately mail order is fairly quick and I generally don't wait more than three weeks for my supplies.

Incidentally, I prefer to tell people I "make beer" rather than "I am a homebrewer" because the reputation of homebrew still suffers and revelations about one's hobby invariably elicit a few ha-ha anecdotes about exploding bottles and the like. This type of attitude has spurred me on. I have been brewing all-grain beers because our local malt extract imparts an unmistakable "tang" to the finished product.

I am very interested in exchanging brewing information with anyone in the United States and will reply to any letters sent to P/bag 2002, Dundee 3000, South Africa.

I would be very keen to start up a microbrewery but I am dubious over whether a sound knowledge of organic chemistry (which I lack) is a prerequisite. Any information in this regard would be appreciated.

R.J. Hooper
Dundee, South Africa

Dear Mr. Hooper,

In response to your letter, knowledge in organic chemistry is not a prerequisite for you to open your own brewery. Small breweries can be one-person operations, but rarely are. If you don't have sufficient knowledge to brew your beer, there are options to choose from: (1) join a partnership or hire on as an employee of a brewer with the necessary credentials and (2) take classes at one of the brewing schools in Germany, the United Kingdom or the United States.

It is important to note that knowledge in areas other than organic chemistry, specifically in microbiology, food science and fermentation science, can be useful in brewing.

Best of luck and don't forget that the Association of Brewers and its divisions, the Institute for Brewing Studies, Brewers Publications and the

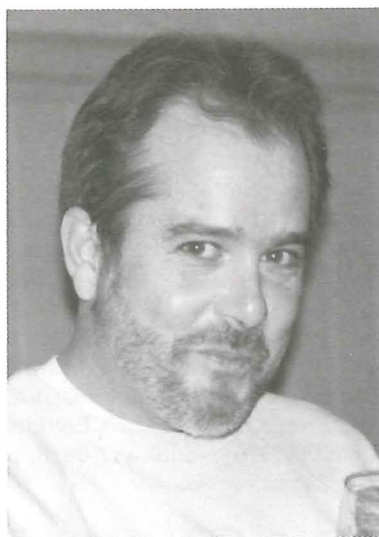
American Homebrewers Association, all stand ready to meet your information needs.

Jeff Mendel
Director, Institute for
Brewing Studies

Corrections

The *zymurgy* Special Issue (Vol. 14, No.4) carried beer labels, to complement the beer style articles. Some of the labels were incorrectly attributed. Randy Mosher, Chicago, is the designer responsible for the following labels: Toadex Bloatarian Ale, Pudgy McBuck's Celebrated Cocoa Porter, Wee Willie Winkie Scotch Ale, O.R. Authentic Ohio River Steam Beer and Shawnee Porter.

Paddy Giffen was incorrectly pictured in the same issue in the "About the Authors" section. The man in the photo was actually DeWayne Saxton. The biography printed was correct for Giffen who is pictured here.



And finally, Michael Jackson wrote the Special Issue article on Saison. The article was incorrectly attributed to Jean-Xavier Guinard.

(See page 15 for BJCP correction.)

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KAREN BARELA

Just Brew It!

Complete and detailed information on the 14th Annual AHA 1992 National Conference is available in this issue. The Conference and final competition in Milwaukee, Wis., June 10 to 13, promise to be educational and filled with quality beer, practical brewing information, the latest in technical advances, knowledgeable speakers, expert beer judges, club news and booths, new and old friends and the perfect atmosphere to make it all happen. If you've never been to the AHA National Conference before, we think it's about time you do yourself and your homebrew a favor — go! For those who have attended and know how great this Conference is, be sure to register early and begin planning now. As our theme suggests, we want you to brew, we want to give you the information you need to brew and we want you to have fun doing it. Just brew it!

Fourth Site for National Competition

In our effort to improve and expand the National Competition, we have added Chicago as a fourth site for the first-round judging. Having three sites for the 1991 Nationals proved to be very successful and added to the spirit of the competition. Expanding to four geographical locations allows BJCP novice and apprentice judges the opportunity to gain experience points in a National Competition, a convenience for many. Thank you to our first-round sponsoring breweries: Anchor Brewing Co., Boston Beer Co., Boulder Beer Co. and Goose Island Brewing Co.

BJCP Article Inspires Judges

The article "How Can the Beer Judge Certification Program Benefit You?" in *zymurgy* 1991 Special Issue (Vol 14, No. 4) has resulted in many inquiries and lots of enthusiasm about the BJCP program. The most common question is, "When is an exam scheduled within driving distance of where I live?" By checking the "Calendar of Events" you will find a list of the 1992 exams across the country that we are aware of at press time. If nothing is scheduled in your area, you may want to help organize an exam that is convenient for you and a minimum of four other interested people.

One aspect of arranging an exam involves finding a delegate who is geographically close or willing to travel to your area. For this reason, we ask that the circumstances for having an exam in any given area include a minimum of two months notice (it usually takes three or four months), a minimum of five dedicated exam takers, a location (often a homebrew supply shop, club meeting location or any other quiet place with desks and chairs) and a list of three possible dates. Contact BJCP Administrator Karen Barela, PO Box 1679, Boulder, CO 80306-1679; (303) 447-0816, or FAX (303) 447-2825.

Rule Exception Made for New BJCP Judge

First-time exam taker, Gerald Samplawski, recently passed the BJCP exam. A quadriplegic, Samplawski used a special tool to type his answers into a laptop computer. Normally we ask examinees

to handwrite exams, however an exception was made and Samplawski completed the exam in just over the usual three-hour time. A person with carpal tunnel syndrome recently expressed concerns about handwriting the exam in three hours. Anyone who requires special arrangements may contact the exam delegate or the BJCP administrator.

Alberta Rager Joins BJCP Committee

Alberta Rager, National BJCP judge from Mission, Kan., was appointed by the Home Wine and Beer Trade Association and approved by the BJCP committee as BJCP associate director. She joins Steve Stroud who was appointed last fall. Rager and Stroud will help Co-directors Pat Baker and Jim Homer with exam grading. In 1991, 169 people took the exam in 33 locations. Anyone interested in having a particular topic or subject on the BJCP annual committee meeting agenda may contact Karen Barela by April 30.

Clubs Given Smart Caps

The AHA sent all 240 registered clubs samples of a new bottle cap, SmartCap™ by Zapata, which was in testing and development for more than a year. The AHA is the first to offer them to the public. SmartCap™ removes oxygen from bottled beer and blocks the oxidation process that produces a stale flavor and limits shelf life. For information call the AHA sales department at (303) 447-0816, FAX (303) 447-2825, or write PO Box 1679, Boulder, CO 80306-1679.

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Members-Only Tasting a Big Success at GABF

For the first time in the 10-year history of the Great American Beer Festival, the AHA and the Institute for Brewing Studies held a members-only tasting. About 300 members who purchased a ticket for either the Friday or Saturday GABF were invited to attend the tasting Saturday afternoon. Several professional brewers were on hand to answer questions and the AHA staff was available to talk about our mutual enthusiasm for

homebrewing. Members were able to take a few quiet moments to sample some of the 550 beers. The members-only tasting will be scheduled again for Saturday afternoon during the 1992 Great American Beer Festival.

Ninkasi Award New 1992 National Competition Award

Inscribed in cuneiform on a 4,000-year-old Sumerian clay tablet is the world's first written account of brewing, "The Hymn to Ninkasi," describ-

ing ancient processes for brewing beer. Ninkasi is the Sumerian goddess of brewing. Some scientists believe the first steps to civilization were not taken by baking bread, but by brewing beer. If they are right, beer was the catalyst for civilization. The 1992 AHA National Competition introduces the Ninkasi Award honoring the high-point brewer of the year.

Similar to the club high-point award, the Ninkasi Award will be presented to the brewer who accumulates the most points based on a point scale for first-, second- and third-place winners. We named the award after the goddess of brewing to honor the historical aspects of brewing and its importance to civilization. For a look at who would have won this award had it been in existence since the beginning of the competition, see the following list, which also contains the names of Homebrewers of the Year from the first competition in 1979 through 1991. In some years the homebrewer of the year also *would* have been the high-point brewer of the year; often, it would have been another homebrewer.

1991

Steven and Christiana Daniel, League City, Texas. (Homebrewer of the Year — Jim Post, Newtown, Conn.)

1990

Phil Rahn, St. Peters, Mo. (Homebrewer of the Year — Richard Schmit, Arlington Heights, Ill.)

1989

Steve Daniel, League City, Texas. (Homebrewer of the Year — Paul Prozeller, Hamden, Conn.)

1988

Byron Burch, Santa Rosa, Calif. (Homebrewer of the Year — John C. Maier, Juneau, Alaska)

1987

Ray Spangler, Erlanger, Ky. (Homebrewer of the Year — Ray Spangler, Erlanger, Ky.)

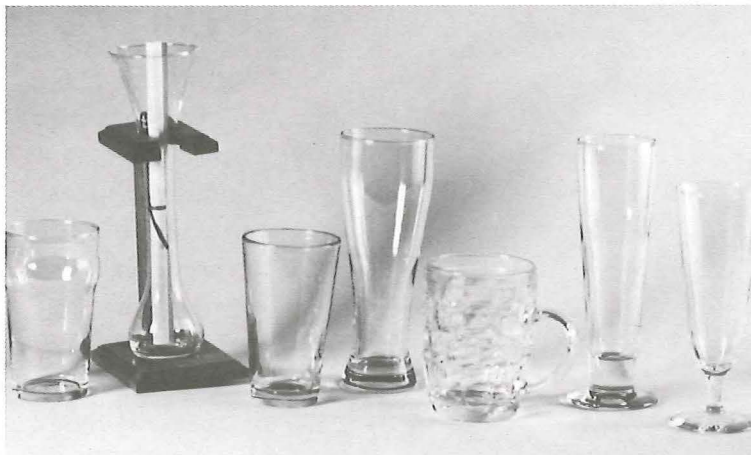
1986

Byron Burch, Santa Rosa, Calif. (Homebrewer of the Year — Byron Burch, Santa Rosa, Calif.)

1985

Russell Schehrer, Denver, Colo. (Homebrewer of the Year — Russell Schehrer, Denver, Colo.)

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Jim Hilton, Charlie Papazian, Dave Ruggerio, Tom Gorman and Matt Koury at the Barley Malt and Vine in West Roxbury, Mass.

1984

Gary Bauer, Milwaukee, Wis.
(Homebrewer of the Year — DeWayne Lee Saxton, Chico, Calif.)

1983

Mark Van Buskirk, Citrus Heights, Calif. (Homebrewer of the Year — Nancy Vineyard, Santa Rosa, Calif.)

1982

Donald F. Thompson, Dallas, Texas.
(Homebrewer of the Year — Donald F. Thompson, Dallas, Texas)

1981

Steve Sullivan, Fort Collins, Colo.
(Homebrewer of the Year — Dave Miller, St. Louis, Mo.)

1980

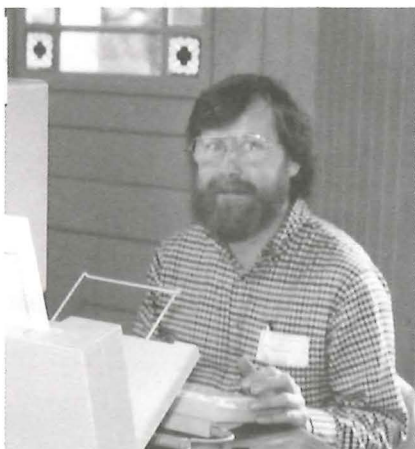
B. Winter and G. Brown, Denver, Colo.
(Homebrewer of the Year — Mary Beth Millard, Boulder, Colo.)

1979

Tim Mead, Boulder, Colo.
(Homebrewer of the Year — Tim Mead, Boulder, Colo.)

Charlie's Travels

AHA President Charlie Papazian traveled to Calgary, Alberta, Canada, Sept. 13 to 17, where he visited several homebrew shops and met for an evening with local homebrewers at Brewsters Brewpub and Brasserie No. 2. On Oct. 26, he was in Boston for a homebrew banquet and book signing for *The New Complete Joy of Home*



Russ Wigglesworth at the 13th annual California State Homebrew Competition in San Francisco, Calif.

Brewing. Dave Ruggerio, owner of Barley Malt and Vine, sponsored the trip and organized the banquet. Charlie was in San Francisco Nov. 10 for the 13th Annual California State Homebrew Competition, where he helped judge the light lager category. At the Taste of the Great Lakes Homebrew Conference and Competition in Frankenmuth, Mich., Nov. 16, he met with 100 homebrewers and gave a presentation on beer styles.

On Dec. 7 Charlie was in Washington, D.C., for the Homebrew and Wine Expo where he visited homebrew shops, local breweries and autographed copies of his new book. In February Charlie traveled to the Institute of

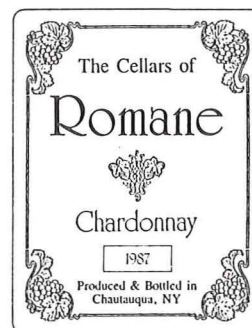
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Brewing Convention in Australia and in March to Seattle to visit homebrewers, retailers and breweries. In April he will be in Orlando, Fla., to proctor a BJCP exam, give a seminar and sign copies of *The New Complete Joy of Home Brewing*. Then it's off to Milwaukee for the Institute for Brewing Studies Annual Microbrewers/Pubblers Conference and Trade Show, where he will return in June for the AHA National Convention. As always with Charlie's travels, he is interested in meeting with local homebrewers, clubs and breweries.

New Staff

James Spence joined the AHA in the fall as AHA administrator in charge of clubs, CompuServe, *zymurgy's* "Brew News" and overall right-hand person. He brings skills acquired working for Montana Beverage Ltd. (Kessler Brewery) and homebrewing for the past several years. Many of you have been communicating with him over CompuServe and through club news and are aware of his brewing knowledge. Susanne Price, an active member of the Hop Barley and the Alers homebrew club and avid homebrewer, is our new shipping clerk. Also new to the staff are Marilyn Cohen and Wayde Austad. Cohen grew up in the Denver area and returned recently from California. Austad is from Utah. As *zymurgy's* new art director, Cohen will help create a fresh look for *zymurgy*. As circulation director, Austad will see that *zymurgy* reaches your mailbox.

AHA Staff to Attend IBS Conference

Elizabeth Gold, *zymurgy* managing editor and Brewers Publications director, Linda Starck, *zymurgy* and *The New Brewer* advertising manager and Karen Barela, AHA vice president, will attend the Institute for Brewing Studies Annual Microbrewers/Pubblers Conference and Trade Show April 26 to 29 in Milwaukee, a meeting of more than 300 professional brewers where we will expand the affiliation between homebrewers and professionals. The ex-

change of information has always been useful to both markets, who benefit from each other's expertise.

National Homebrew Day

Mark your calendars now to celebrate National Homebrew Day May 2 with homebrewers across the country. National Competition entrants will be awaiting news from the first-round judging, while judges will be remembering the great prize-winning beer they recently tasted. With your club, local brewery or homebrewing friends, celebrate this day with homebrew and the freedom to enjoy it.

We Goofed — BJCP and National Competition Corrections

In *zymurgy* 1991 Special Issue (Vol. 14, No. 4), we incorrectly stated on page 9 that a certified judge needs to score 60 percent on the BJCP exam. To become a certified BJCP judge you need 70 percent on the exam and earn five experience points, 2.5 of which are judging points.

The AHA 1992 National Competition Rules and Regulations insert which appeared in the Winter *zymurgy* (Vol. 14, No. 5) needs the following corrections: Page 4, Section D No. 1. The first-place beer from each Category of Beer and Mead will be chosen from the second round to go on to Best-of-Show judging. Page 5, No. 5. American Style Pale Ales, category award sponsored by Northwestern Extract Co., Brookfield, Wis.

zymurgy Welcomes Contributors

zymurgy welcomes ideas, outlines, proposals or manuscripts on the subjects of beer, cider, mead, sake or brewing. All submissions will be carefully considered. Direct inquires to Elizabeth Gold, managing editor, *zymurgy*, PO Box 1679, Boulder, CO 80306-1679.

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WHEN AND HOW

Entry deadline is March 16 to April 1. Entry fee for each category entered is \$7.50 for AHA members, \$9.50 non-members. Entrants may not submit more than one entry in any one subcategory. If your entry is judged to move into second round, notification will be sent to you by first-class mail May 8.

WHAT

For Homebrew and Mead, send one (for each subcategory entered) 10- to 14-ounce bottle, clean and free of any labels (inked, paper or otherwise) raised designs or any other identifying marks. Grolsch-type wire swing tops and/or corks are not acceptable. Printed crowned caps must be blackened. Send your entries to one of four locations.

For Cider and/or Sake send three (for each subcategory entered) 10- to 14-ounce bottles, clean and free of any labels (inked, paper or otherwise) raised designs or any other identifying marks. Grolsch-type wire swing tops and/or corks are not acceptable. Printed crowned caps must be blackened. Send your entries to one of two locations.

WHERE

If you live in California, Hawaii, Nevada, Oregon, Washington send your entries to:
NHC 92 c/o Anchor Brewing Co., 1705 Mariposa St., San Francisco, CA 94107.

If you live in Alabama, Alaska, Arizona, Arkansas, Colorado, Florida, Georgia, Idaho, Kansas, Louisiana, Mississippi, Montana, Nebraska, New Mexico, North Dakota, Oklahoma, South Carolina, South Dakota, Tennessee, Texas, Utah, Wyoming send your entries to: NHC 92 c/o Boulder Beer Co., 2880 Wilderness Place, Boulder, CO 80301.

If you live in Indiana, Iowa, Illinois, Kentucky, Michigan, Minnesota, Missouri, Ohio, West Virginia, Wisconsin send your entries to: NHC 92 c/o Goose Island Brewing Co., 1800 N. Clybourn, Chicago, IL 60614.

If you live in Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, North Carolina, Pennsylvania, Rhode Island, Vermont, Virginia, District of Columbia, send your entry to: NHC 92 c/o Boston Beer Co., 30 Germania St., Jamaica Plain, Massachusetts 02130

Send your Cider entries to:

Cider NHC 92 c/o Boston Beer Co., 30 Germania St., Jamaica Plain, MA 02130

Send your Sake entries to: Sake NHC 92 c/o F.H. Steinbart Co., 234 S.E. 12th, Portland, OR 97214.

WHY

Every attempt will be made to return judges score sheets to each entrant. Entrants will find judges comments and suggestions useful for improving the quality of homebrew. Awards of first, second and third place will be awarded in each of the 28 categories. Awards will also be given for Homebrewer of the Year, Meadmaker of the Year, Club High-Point and High-Point Homebrewer (The Ninkasi Award).

WHO

First-round judging takes place April 6 to 22 in four geographical locations, Boulder, Jamaica Plain, Chicago and San Francisco. Second round and Best of Show will be judged June 10 to 13 during the AHA National Conference, Milwaukee, Wis. All levels of judges are needed. If you would like to participate, contact James Spence at the AHA (303) 447-0816.

Complete details, Rules and Regulations are available in the Winter issue of *zymurgy* (Vol. 14, No. 5). The eight-page brochure is available upon request but must be accompanied by a self-addressed, stamped (52 cents) business-size envelope.

For more information, call or write the AHA PO Box 1679, Boulder, CO 80306; (303) 447-0816, FAX (303) 447-2825.

CATEGORY	SUBCATEGORIES	CATEGORY	SUBCATEGORIES
ALES		MIXED STYLE (LAGER-ALE)	
1 Barley Wine	a) Barley Wine	14 Munich Helles	a) Munich Helles
2 Belgian-Style Specialty	a) Flanders Brown b) Dubbel c) Trippel d) Belgian Ale e) Belgian Strong Ale f) Lambic Style: Gueuze Faro Fruit (Framboise, Kriek, Pêche) g) White	15 Classic Pilsener	a) German b) Bohemian
3 Brown Ales	a) English Brown Ales b) English Mild c) American Brown	16 American Light Lager	a) Diet/Lite b) American Standard c) American Premium d) Dry e) American Wheat
4 English Style Pale Ale	a) Classic English Pale Ale b) India Pale Ale	17 Vienna/Oktobertest/Märzen	a) Vienna b) Märzen/Oktobertest
5 American Style Pale Ale	a) American Pale Ale b) Cream Ale	18 German-Style Ale	a) Düsseldorf-style Altbier b) Kölsch
6 English Bitter Scottish Ale	a) English Ordinary b) English Special c) English Extra Special d) Scottish Light e) Scottish Heavy f) Scottish Export	19 Fruit Beer	a) Fruit Beer b) Classic Style Fruit Beer
7 Porter	a) Robust Porter b) Brown Porter	20 Herb Beer	a) Herb Beer b) Classic Style Herb Beer
8 English and Scottish Strong Ale	a) English Old Ale/Strong Ale b) Strong "Scotch" Ale	21 Specialty Beer	a) Specialty Beer b) Classic Style Specialty Beer
LAGERS		22 Smoked	a) Bamberg-style Rauchbier b) Other (brewer to specify style smoke added to, for example, porter)
9 Stout	a) Classic Dry Stout b) Foreign Style c) Sweet Stout d) Imperial Stout	23 California Common Beer	a) California Common Beer
10 Bock	a) Traditional German Bock b) Helles (light) Bock c) Doppelbock d) Eisbock	24 Wheat Beer(Ale)	a) Berliner Weisse b) German-style Weizen/Weissbier c) German-style Dunkelweizen (dark) d) German-style Weizenbock
11 Bavarian Dark	a) Munich Dunkel b) Schwarzbier	MEAD	
12 American Dark	a) American Dark	25 Traditional Mead	a) Sparkling b) Still
13 Dortmund/Export	a) Dortmund/Export	26 Melomel, Cyser, Pymment, Methglin	a) Sparkling b) Still
		CIDER	
		27 Cider	a) Still b) Sparkling c) New England Style d) Specialty Cider
		SAKE	
		28 Sake	a) Sake (Japanese rice beer) b) Sparkling Sake c) Other Oriental Rice Beers

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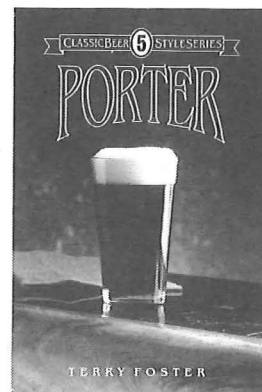
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BREW NEWS

JAMES SPENCE

New Jersey Homebrewers Toast Legalization

Gov. Jim Florio signed legislation Nov. 7 permitting homebrewing in New Jersey. The bill, sponsored by Assemblyman Arthur R. Albohn, permits each person over age 21 to make 100 gallons of beer annually, up to 200 gallons per household, for non-commercial purposes. "Enthusiasts say the art of homebrewing, also known as zymurgy, is growing in popularity as a hobby in New Jersey and nationwide," Albohn said in an interview, "Although many may practice it, New Jersey law as it stood prior to the new law made no provision for it." The state's Alcoholic Beverage Control division may require homebrewers to purchase a permit.



Art Albohn on left receives homebrew and thanks from Ed Busch, president of MASH, the original homebrew club of New Jersey, for his efforts in legalizing the hobby of homebrewing in the state. Homebrew in New Jersey became legal on Nov. 7, 1991.

Ed Busch, New Jersey resident and member of the AHA Board of Advisers, was responsible for the lobbying efforts required to legalize homebrewing. Busch proposed the bill in 1985 and after a six-year struggle was rewarded with its passage. "We can fire up the brew kettles in public, talk about what we do openly without fear of reprisal and have our picture in the newspaper without having our faces masked," Busch said in the MASHers Bulletin, his club newsletter. "Our hobby, our interest in brewing and brewing science is an honest avocation."

Beer Bucks

A state-by-state economic impact study by the Beer Institute reports that the beer industry provides more than 2.7 million jobs with a payroll exceeding \$51.4 billion. The beer industry itself directly supports more than 900,000 of these jobs. Agriculture, packaging, shipping, construction, food processing and wholesaling make up the remainder of the employment impact on the nation.

According to the study, the beer industry's total economic impact is \$168 billion. Of that, the federal government takes \$1.7 billion in taxes and another \$10 billion goes to state and local governments.

"I have one or two after work sometimes."

A proposed amendment to the Illinois Human Rights Act prohibiting an employer from asking job applicants whether or not they consume

alcoholic beverages was vetoed by Gov. Jim Edgar after passing in the house and senate.

Quoted in *NBWA Beer Perspectives*, Edgar believed such an amendment prohibiting employers from questioning potential employees was "improper interference" into the private sector. He added: "There are reasonable circumstances under which a prospective employee's conduct outside of work should be known immediately by an employer, especially when that employee's performance or execution of the job is affected or impaired by that conduct."

The proposal was backed by the Associated Beer Distributors of Illinois because the proposal would help prevent prejudicial discrimination against prospective employees. The ABDI pointed out it is illegal in many cases to ask an applicant's age, race or religion and the measure was not intended to prevent an employer from establishing alcohol policies once an applicant is hired, but to prevent pre-employment discrimination.

Homebrew à la Islam

An Associated Press article reports that British beer bags are being sold in Cyprus by Ship-Shape. Beer bags are packages with all the ingredients for about 2.5 gallons of beer when fer-

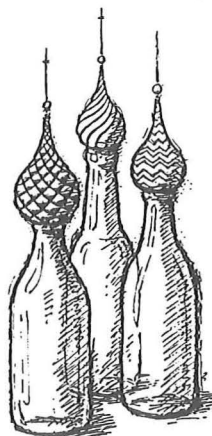


Illustration by John Martin

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mented. Because the product contains no alcohol when purchased, the strict Islamic laws against purchasing and consuming alcoholic beverages do not apply. According to the article, in Saudi Arabia foreigners caught violating the liquor laws can be flogged and expelled from the country. Homebrewing is reluctantly tolerated in Arab countries because, under Arab customs, homes are considered inviolate.

Alcoholic Beverages — Good For You?

Several studies suggest that moderate consumption of alcohol contributes to good health. *Lancet*, a British medical journal, reported a study of more than 51,000 men to determine the long-term effects of alcohol consumption. Compared with men who abstain from alcohol, men who drank up to two drinks a day reduced their risks of heart disease by 26 percent. The effect was still evident after eliminating such factors as heavy alcohol consumption, diet and heart disease already present. Participants who drank more than two drinks a day had a 47 percent reduction in risk of heart disease compared to non-drinkers. About 10 percent of the men were smokers.

Scientists believe alcohol may increase blood levels of high-density lipoprotein, a substance that helps fight fat buildup in the arteries. Other studies show that alcohol may inhibit blood clotting, thus lowering the chances of a thrombosis, or blood clot, forming in the arteries.

Eric B. Rimm of the Harvard School of Public Health and project director of the study noted that presenting such information can be controversial. Because alcohol is connected with other ailments, including hypertension, cirrhosis of the liver and colon cancer, many fear that inappropriate drinking may be encouraged by material supporting the beneficial effects of alcohol.

Finally, an article in the *New York Times* about radioactive contamination near landfills reports that

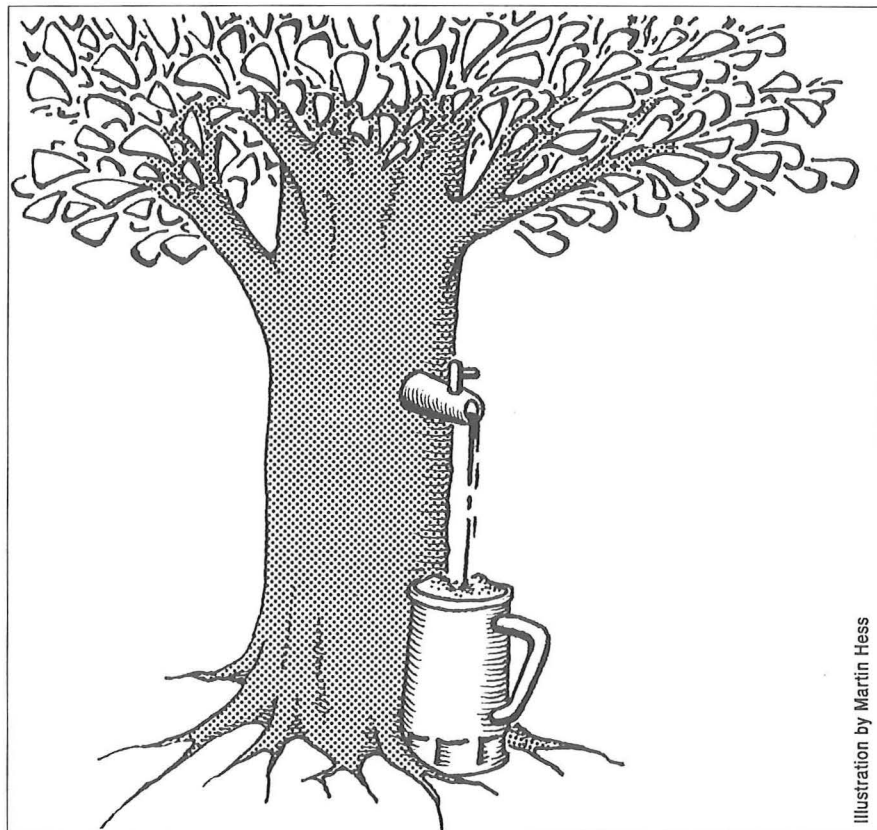


Illustration by Martin Hess

the recommended treatment for workers exposed to large amounts of tritium, a weak radioactive substance, is the consumption of large amounts of beer to flush the radioactivity from the body.

The Tree of Life

New Zealand meadmaker Leon Havill reports that he has found a beer tree, a hollow tree once inhabited by bees. After being flooded with rainwater, natural fermentation produces an alcoholic beverage. Havill says that people have been tapping the tree for over 150 years and that such trees may have been the original inspiration for meadmaking.

Slugfest

Lots of people have found that beer is excellent slug bait. A shallow dish of beer attracts slugs which drown in the brew. But which brand do slugs like most? Biologist Whitney Cranshaw of Colorado State University surveyed 2,500 garden slugs and

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CALENDAR OF EVENTS 1992

- | | |
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| <p>March 16-April 1 Entries received for AHA National Homebrew Competition. For complete information, call the AHA at (303) 447-0816.</p> <p>March 21 A homebrewers gathering with Charlie Papazian, Seattle, Wash. Contact Charlie Finkel, Liberty Malt, at (206) 622-1880.</p> <p>March 27 Gem State Homebrewer's Competition, AHA Sanctioned Competition, Boise, Idaho. Contact John Delaney at (208) 386-6115.</p> <p>March 28 BJCP Exam, Topsham, Maine. Contact Michael LaCharite at (617) 395-6822.</p> <p>March 28 The Hudson Valley Homebrewers 2nd Annual Homebrew Competition, AHA Sanctioned Competition, Kingston, N.Y. Contact Bruce Franconi at (914) 758-0661.</p> <p>March 30 Bock is Best, AHA Club-Only Sanctioned Competition. Entry deadline is March 30. Call the AHA at (303) 447-0816.</p> <p>April 4 New Jersey Freedom to Brew Competition, AHA Sanctioned Competition, Hillsborough (Somerville), N.J. Contact Edmund J. Busch at (908) 874-3234.</p> <p>April 4 Great Canadian Homebrew Competition, AHA Sanctioned, Toronto, Ontario. Entry deadline is April 4; final judging May 1. Contact Paul Dickey at (416) 239-1851.</p> <p>April 6-22 AHA National Competition, First-round judging, Jamaica Plain, Boulder, Chicago and San Francisco. For complete information on how you can participate, call the AHA at (303) 447-0816.</p> <p>April 10-11 BJCP Exam and beer seminar with Charlie Papazian who will be signing <i>The New Complete Joy of Home Brewing</i>, Winter Park, Fla. Contact Ed Greenlee at (407) 277-3791.</p> <p>April 11 Second Annual Southern California Homebrewers Festival, Temecula. Registration fee of \$20 includes lunch, dinner and a tasting glass. Contact Gerald Stoker at (213) 598-2382.</p> <p>April 11 Second Three Rivers Alliance of Serious Homebrewers Sanctioned Competition, AHA Sanctioned, Pittsburgh, Pa. Contact Ralph Colaizzi at (412) 931-9099.</p> <p>April 11 Carolina Brewmasters Homebrewing Club, AHA Sanctioned Competition, Dilworth Brewing Co., Charlotte, N.C. Entry deadline is April 8. Contact Roman Davis at (704) 568-6274.</p> <p>April 17 Maltose Falcon's 1992 Mayfaire Competition, AHA Sanctioned, Woodland Hills, Calif. Contact Brian Vessa at (310) 826-5902.</p> <p>April 25 BJCP Exam, Rochester, N.Y. Contact Paul Dickey at (416) 239-1851.</p> | <p>April 26-29 National Microbrewers/Pubbrewers Conference and Trade Show, Milwaukee, Wis. Call the Institute for Brewing Studies at (303) 447-0816.</p> <p>April 28 Green Mountain Homebrew Competition, AHA Sanctioned Competition, entry deadline is April 28, final judging is May 2, Burlington, Vt. Call Something's Brewing at (802) 660-9008.</p> <p>May 1 Great Canadian Homebrew Competition, AHA Sanctioned, Toronto, Ontario. Entry Deadline is April 4. Contact Paul Dickey at (416) 239-1851.</p> <p>May 2 National Homebrew Day</p> <p>May 2 Third Annual Central Florida Sunshine Challenge, AHA Sanctioned, The Mill Bakery, Brewery and Eatery, Winter Park, Fla. Contact Ed Greenlee at (407) 277-3791.</p> <p>May 2 First Annual CAMRA B.C. Homebrewing Competition, AHA Sanctioned, Victoria, B.C. Contact Phil Cottrell at (604) 363-3267.</p> <p>May 21-23 HWBTA National Conference, Pittsburgh, Pa. Contact Shirley Martin at (412) 366-0151.</p> <p>June 1 Penultimate Pilsener, AHA Club-Only Sanctioned Competition. Entry deadline is June 1. Call the AHA at (303) 447-0816.</p> <p>June 10-13 AHA National Homebrew Conference, Marc Plaza Hotel, Milwaukee, Wis. Call the AHA at (303) 447-0816.</p> <p>July 11 Mazer Cup Mead Competition, AHA Sanctioned, Ann Arbor, Mich. Contact Ken Schramm at (313) 377-8680.</p> <p>July 17-19 Oregon Brewers Festival, Waterfront Park, Portland, Ore. Call Widmer Brewing Co., (503) 281-2437 or Bridgeport Brewing Co., (503) 241-7179.</p> <p>Aug. 3 Weiss is Nice, AHA Club-Only Sanctioned Competition. Entry deadline is Aug. 3. Call the AHA at (303) 447-0816.</p> <p>Aug. 4-8 CAMRA Great British Beer Festival, West London, England. Write Campaign for Real Ale, 34 Alma Road, St. Albans, Hertsfordshire, AL1 3BW. Call 0727 867201, or FAX 0727 867670.</p> <p>Oct. 2-3 Great American Beer Festival XI, Denver, Colo. Call the Association of Brewers at (303) 447-0816, or write PO Box 1679, Boulder, CO 80306-1679. FAX (303) 447-2825.</p> <p>Oct. 1 Best of Fest, AHA Club-Only Sanctioned Competition. Entry deadline is Oct. 1. Call the AHA at (303) 447-0816.</p> <p>Nov. 7 Taste of the Great Lakes Conference and AHA Sanctioned Competition. Entry deadline is Oct. 2, 1992. Contact Fred Sheer at (517) 652-3882.</p> <p>Dec. 1 Barley Wine is Fine, AHA Club-Only Sanctioned Competition. Entry deadline is Dec. 1. Call the AHA at (303) 447-0816.</p> |
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To list events, send information to **zymurgy** Calendar of Events. Competition organizers wishing to apply for AHA sanctioning must do so at least two months before the event. Contact Karen Barela at PO Box 1679 Boulder, CO 80306-1679, (303) 447-0816, FAX (303) 447-2825.

found they preferred Budweiser five to one over other brands.

The Beer Necessities

Anheuser-Busch, the world's largest producer of beer, is suing Sterling Distributors Ltd. over "Bumweiser," a line of men's underwear stuffed in beer bottles. The Canadian firm agreed to change the name to "Beerbriefs," but Anheuser-Busch is continuing the suit. Anheuser-Busch lost a suit against a Cleveland florist who used "This bud's for you" as a slogan.

AHA SANCTIONED COMPETITIONS

Los Angeles County Fair Competition

Competing against 108 entries on Aug. 24, David Sherfey of La Crescenta, Calif., won best of show with his still chili mead "Afterglo" at the Los Angeles County Fair Homebrew Competition in Pomona.

San Juan County Fair

The San Juan County Fair drew seven homebrew entries. John Campbell of Orcas, Wash., took best of show at the Aug. 15 competition with a lager.

Alaska State Fair

Palmer, Alaska, drew 95 entries for the Aug. 18 Alaska State Fair Homebrew Competition. Clarke Pelz of Anchorage won best of show with his Raspberry Friendship Stout.

First T.R.A.S.H. Competition

Decimator Doppelbock brewed by Gregory Walz of Pittsburgh beat 17 bock entries, while a mead by Coraopolis, Pa., resident Kathy Benson was chosen from 22 entries in the First Annual T.R.A.S.H. Bock and Mead Competition Aug. 24 in Pittsburgh.



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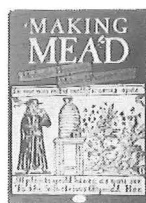
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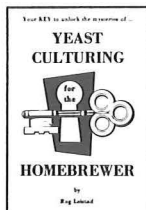
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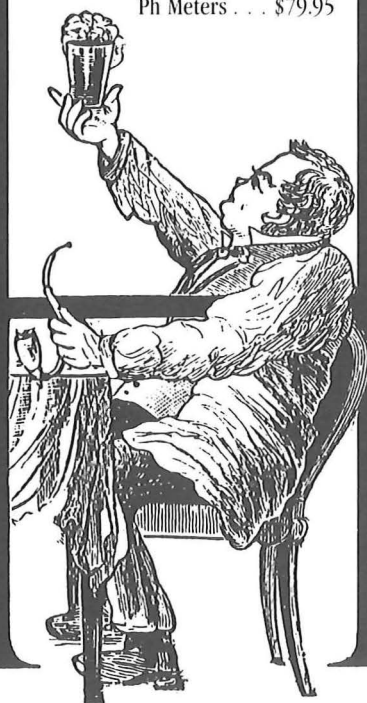
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Western Washington Competition

A brown ale by Keith Riedl of Seattle won best of show from 118 entries at the Aug. 25 Western Washington Fair Amateur Beer Competition.

Sonoma County Harvest Fair

An Oktoberfest brewed by Fresno resident Jim Lopes won best of show at the Sonoma County Harvest Fair Homebrew Competition in Santa Rosa, Calif. The Sept. 14 competition drew 153 entries.

Mid-South Fair

Judges at the 1991 Mid-South Fair Homemade Beer Competition awarded best of show to Dave Hunter of Gaston, Ore., who brewed a fruit beer. Ninety-three entries were received for the Sept. 24, 27, 28 competition in Memphis, Tenn.

1991 Oktoberfest Bestbier

On Oct. 5 Waldoboro, Maine, hosted eight entries for the 1991 Oktoberfest Bestbier competition. Bill Giffen of Richmond, Maine, took first place.

Farmers Fair Competition

Alex Puchner of Redondo Beach, Calif., won best of show at the Farmers Fair in Riverside, Calif. His wheat beer beat 67 other entries in the Oct. 19 competition.

Santa Clara Competition

The Santa Clara County Fair drew 83 entries July 20 with beers in 15 categories.

All About Ales

The All About Ales competition in Toronto, Ontario, drew 54 entries on Oct. 26. Geoff Mallard of Tottenham, Ontario took Best of Show with his English bitter.

MICRO AND PUBBWERIES

(Information provided by the Institute for Brewing Studies.)

OPENINGS

United States

Microbreweries

Montana: Whitefish Brewing Co., Whitefish

Washington: Hale's Ales, Spokane
Brewpubs

California: Dempsey's Ale House/Sonoma Brewing Co., Petaluma

Colorado: Champion Brewing Co., Denver; Oasis Brewery, Boulder; Rock Bottom Brewing Co., Denver; San Juan Brewing Co., Telluride

Idaho: Barleyhoppers Brewpub, Moscow

Illinois: Millrose Brewing Co., S. Barrington; Joe's Brewing Co. (formerly Chief's Brewing Co.), Champaign

Massachusetts: The Beer Works, Boston

Missouri: St. Louis Brewery/The Taproom, St. Louis

New York: Company B's Brewpub and Restaurant, Orangeburg; Zip City Brewing Co., New York City

South Dakota: Firehouse Brewing Co., Rapid City

Washington: California and Alaska Street Brewery, Seattle

Canada

Ontario: Hart Breweries Ltd., Carleton Place

British Columbia: Nelson Brewing Co., Nelson

CLOSINGS

United States

Virginia: The Blue Muse, Roanoke

Washington: Duwamps Cafe/Seattle Brewing Co., Seattle

Idaho: Snake River Brewing Co., Caldwell

Florida: Tampa Bay Brewing Co., Tampa

Canada

Ontario: York Brewery, Brampton

JACKSON ON BEER

MICHAEL JACKSON

A Seasonal Search for the Phantom of Brewing

The Belgian man-in-the-street (or rue) probably is more knowledgeable about beer than his counterpart in other countries.

Despite that, he still is inclined to take for granted the marvelous beer selection in his own land.

The integrity of several Belgian beer styles is in danger and some could vanish altogether. Perhaps the most endangered is the saison.

This style is not widely known outside its region of production of Hainaut, in the French-speaking half of the country.

My interest in this style led me to make my first visit to the Dupont brewery, in the hamlet of Tourpes, municipality of Leuze, in western Hainaut.

The making of saisons was regarded as a distinctly Belgian technique by brewing scientists in the late 1800s and early 1900s, although they were produced to meet a situation common to all brewing nations. They were made originally during the winter by farmer-brewers, then laid down for consumption during the summer. The beer had to be sturdy enough to last for some months, but not too strong to be a summer and harvest quencher.

Saisons were regarded in Belgium as beers of medium gravity (today, anything from 1.048 to 1.080). The method, probably arrived at empirically, was to use high mashing temperatures, producing a substantial degree of unfermentable sugars, and to have a period of warm conditioning, usually in metal tanks. In the Belgian tradition, saisons are top fermenting and bottle conditioned.

These beers often are presented in Champagne-style bottles, and were before the more widespread revival of this presentation. They often have an orange color and usually a dense, rocky, head.

Their aroma is often fruity and yeasty, perhaps even powdery. They have a refreshing carbonation and crispness (some are made with quite hard water) and a fruitiness, often

with citric notes. They are usually well hopped, typically with Belgian or British varieties. Traditionally, dry hopping was common. Some are spiced.

I have always thought of Saison Dupont as a down-to-earth classic of the style and was excited about visiting the brewery. This part of Belgium is rural, but fringing on the old industrial area called the Borinage.

There are fields of sugar beet, but the red-brick of the buildings can look careworn, sometimes with chipped whitewash, and there are ads painted on the gable ends, as they are in France.

The town sign for Leuze bears the legend "*ville au trois brasseries*" (town of three breweries). In Leuze, the three breweries are Dupont, A Vapeur

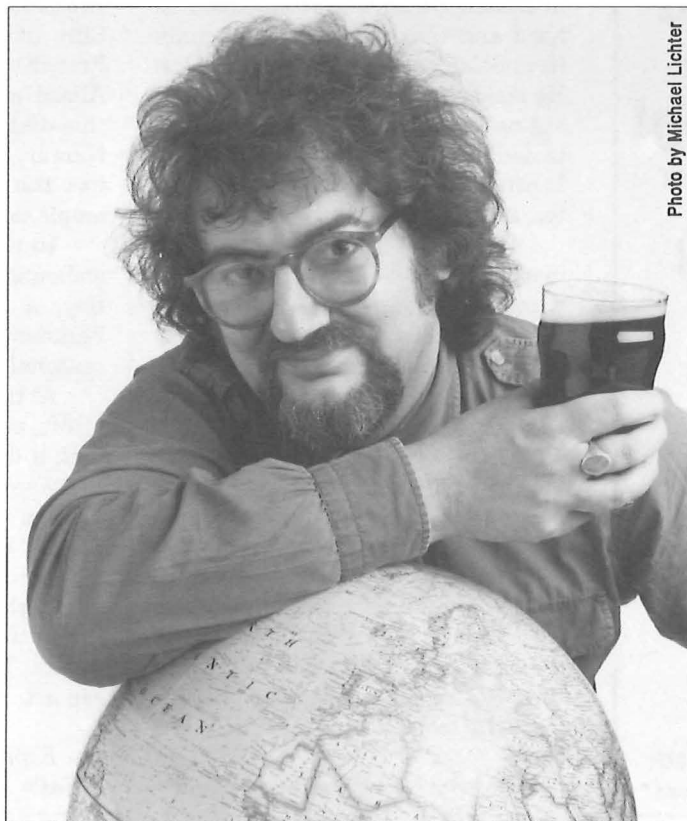


Photo by Michael Lichter



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(making superbly spicy saisons) and Dubuisson (whose Bush Beer resembles an English barley wine). Within the municipality, the latter two are in the village of Pipaix.

Finding the breweries is another question. On a country road a cafe called Caves Dupont caught my eye. Directly opposite was a scatter of brick buildings looking like a farm, which proved to be the Dupont brewery.

It dates from 1850, and since 1920 has been in the Dupont family. The original Dupont's grandson, Marc Rosier, runs the brewery and owns it with his two sisters.

A figure of St. Arnold, the patron saint of Belgian brewers, is set into the wall in one part of the brewery and appears in a small statue in one of the doorways.

Inside the equipment is still much as it was when the brewery began: a cast-iron open mash tun and a flat-topped copper in an agricultural building.

With a matter-of-factness that matched his farmerlike appearance and gait, Rosier answered my questions about his procedures, but without much elaboration.

He told me he uses only pale malt in Saison Dupont, that his water is hard and that the hops are mainly Kent Goldings with some Hallertauers. He makes two additions in the kettle, but no longer dry hops. When I first tasted these beers about 15 years ago, I thought they had even more character, and perhaps that is why.

Rosier said that after primary fermentation there was a week or two of warm conditioning in a metal tank. This was followed by centrifuging, re-yeasting (with a different culture), priming and a good fortnight of maturation in-bottle.

He believes his beers are best at between three and eight weeks after leaving the brewery, but said some customers prefer them at six months.

When he opened a bottle for me to taste, the cork flew through the air. No sooner had one bottle appeared than another would be fetched. "Taste this," Rosier would suggest, every time I sought to probe the secrets of his beer.

"In your view, just how should a saison taste?" I would demand. "It

must be a good honest beer. It should have character. It is essential that it has soul," he would reply with Gallic imprecision. "Here, try this one."

In their house character, Dupont's beers are full of life with a rocky, creamy head; a sharp, refreshing attack; a restrained fruitiness; and a long, very dry finish.


The range includes Saison Dupont itself, subtitled *Vieille Reserve*, at 1.050; a vaguely organic version described on the label as *Biologique*; and stronger pale and dark beers under the name *Moinette* (the dark, or *Brune*, has four malts). Rosier lives on a farm called Moinette. In French, *moine* means monk and the farm is believed to be on what was once an abbey estate.

Between the hoppy, dry *Moinette Blonde* and the perfumy, sweeter *Brune*, is *La Bière de Beloeil*, dedicated to a nearby castle. There was once a brewery at Beloeil producing a beer called *Saison Roland*. Today, there is a *Roland Triple Saison*, from the Lefebvre brewery at Quenast, across the provincial border in Brabant.

Besides Dupont, A Vapeur and Lefebvre, there are other breweries producing saisons. In the province of Hainaut, the breweries Voisin and Silly (it sounds sensible enough in French) use the term saison, and Allard makes similar beers without this designation. In the province of Namur, the bigger brewery Du Bocq has the most widely available example, *Saison Regal*.

In the Belgian province of Luxembourg, in the Ardennes village of Soy, a new microbrewery called Fantome is making very fruity, strong seasonal beers in loosely this style.

At the Fantome brewery, I tasted a soft, sweetish, 1.076 version made with a dash of strawberry juice. At the associated Ferme au Chene brewpub, in nearby Durbuy, I tasted a similar beer, called Markloff, with a maltier character.

Perhaps these breweries will in the future have a crack at a classic saison. The style needs all the help it can get. 

Reprinted with permission from What's Brewing, newspaper of the Campaign for Real Ale.

HOME BREW COOKING WITH THE BREWGAL GOURMET

CANDY SCHERMERHORN

Making Bread With Beer

That age-old question of which came first, the chicken or the egg, is not nearly so engaging as which motivated humans to civilization, beer or bread. Most of us reading *zymurgy* are likely to support the contention that beer must have been the incentive. Let's face it, once the heady results of the first homebrew were tasted, nothing short of full-scale civilization to generate great quantities of this thirst-quenching liquid would do.

Pairing bread and beer at a meal is certainly one of life's more satisfying moments. Envision yourself listening to the winter wind howl, sipping a bottle of homebrew and relishing thick slabs of just-out-of-the-oven bread. Once you have experienced that truly exceptional combination, it is obvious that early humans knew exactly what they were doing when they developed beer and bread first!

When making bread, a few "basics" will ensure consistent results each time. The first is to use hard wheat flour that is high in gluten. It is the gluten in grain that gives the dough elasticity, allowing it to stretch and hold the carbon dioxide bubbles released by the yeast. High gluten flour is marketed nationally as bread flour. The liquid used in the bread (in our case beer) should be 105 to 110 degrees F (40.5 to 43.5 degrees C), never more than 115 degrees F (46 degrees C) for granular yeast. If you

are using fresh block yeast, the temperature should be 85 to 90 degrees F (29.5 to 32 degrees C), never more than 95 degrees F (35 degrees C).

Having many traits in common with people, yeast is happiest and most "fruitful" in a warm place with lots of food. For enthusiastic yeast, stir the bakers yeast in a bowl with one cup of flour, then whisk in the warmed liquid and allow it to rest for 15 to 20 minutes in a warm spot. This gives the yeast a temperate environment and a veritable feast.

The process of kneading the dough is achieved by pushing the dough down, folding it over and rotating it slightly. Add just enough flour to keep the dough from sticking to your hands and the work surface. When extra flour is no longer needed, continue kneading until the dough becomes smooth, elastic and shows small bubbles just below the surface. Do not cut corners on the kneading time—the gluten is developed and strengthened through this process. If not fully

kneaded, the loaf will collapse during baking and you will have a brick instead of a loaf.

Bread will rise at any temperature that does not kill the yeast. Between 80 and 85 degrees F (26.5 and 29.5 degrees C) bread will rise quickly and give excellent results. Between 50 and 55 degrees F (10 and 13 degrees C) bread will rise slowly and develop a slightly tangy (acidic) flavor. Bread also will rise in the refrigerator but will take 6 to 12 hours.

To test baked bread for doneness, tap the top of the loaf, checking for a hollow sound. Tip the loaf out of the pan to make sure the bottom is golden. If pale and moist, bake an additional 8 to 10 minutes.

Many of you will breathe much easier when I tell you that your best beer need not be used for making bread. Even the best brewers have an occasional batch that does not suit their standards or tastes. These are excellent to use in bread. We had a batch of amber come in contact with



some pretty wild yeasts, giving us a beer with quite a soured disposition. While not a drinking success, it certainly makes excellent bread.

Each of the following recipes is full of character and distinctive flavor contributed by the beer—a scrumptious rye, a distinctive curry and a satisfying honey wheat walnut.

Brewed Rye Bread

This dense bread is fragrant with orange zest, honey, beer and spices.

- 3 cups medium rye flour
- 2 tablespoons yeast
- 1 1/2 cups porter-style beer, warmed to 110 degrees F (43.5 degrees C)
- 4 cups bread flour
- 1/2 cup warmed honey
- 2 tablespoons finely minced orange zest
- 3 eggs
- 1/4 cup vegetable oil
- 1/2 teaspoon cinnamon
- 1/2 teaspoon ginger
- 1/4 teaspoon ground cardamom

- 1 egg white beaten with 2 tablespoons honey

(1) Place 1 cup of the rye flour in a large bowl. Stir in the dry yeast and whisk in the warm beer. Cover and allow the mixture to rest in a warm spot for 10 to 20 minutes.

(2) Stir in the honey, zest, eggs, oil, spices and remaining rye flour, beating until smooth.

(3) Stir in the remaining flour 1 cup at a time, using your hands once the dough becomes too thick to stir. Continue adding flour until the dough begins to pull away from the bowl. Vigorously knead the dough on a lightly floured surface (I do it right in the bowl). Continue to sprinkle flour over the dough as needed, just enough to keep the dough from sticking.

(4) When the dough becomes smooth and elastic, turn it onto the counter and clean out the bowl. Rub the bowl with 1 tablespoon of vegetable oil, press the dough into the bowl and turn it over, coating the entire surface of the dough with oil. Cover and allow to rise in a warm, 85 to 90 degree F (29.5 to 32 degree C), place for one hour or until doubled in bulk.

(5) When the dough has doubled, punch it down and allow it to rest covered for five minutes. Divide the dough in half. Roll or pat it lightly into an 8-by-10-inch rectangle on a lightly oiled surface and roll into a loaf. Pinch the ends under. Once formed, slam the dough onto the counter forcefully, seam side down, two or three times to seal and shape the loaf.

(6) Place in a greased bread pan and repeat with the remaining dough. Cover and allow loaves to rise in a warm spot until doubled. Brush the tops with the honey and egg white mixture.

(7) Bake in a preheated 350-degree-F oven for 25 to 30 minutes until the tops are golden and, when tipped out, the bottom is lightly browned.

Variations: Shape the loaves into round peasant loaves and lightly score the top with a sharp knife just before baking. Stir in 2 tablespoons of caraway seeds along with the zest.

Curried Bread

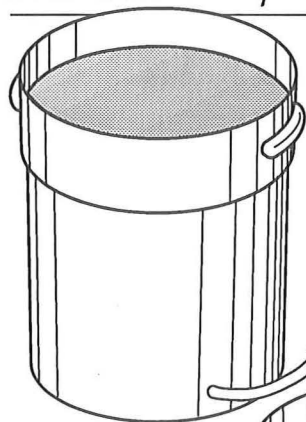
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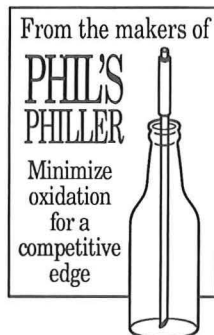
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and is easily shaped into rolls or buns. Great with bratwurst.

- 7 to 8 cups of bread flour
- 2 tablespoons yeast
- 1 cup warm buttermilk at 100 to 110 degrees F (38 to 43.5 degrees C)
- 1 cup English bitter or saison-style beer
- 2/3 cup sugar
- 1/3 cup vegetable oil
- 3 extra large eggs, room temperature
- 1/3 cup curry powder (the best is from small ethnic stores)
- 1 tablespoon salt
- 1 tablespoon warmed honey

(1) Heat the buttermilk and beer to 110 degrees F (43.5 degree C). In a large bowl sprinkle 1 cup of flour and the yeast. Pour in the warm beer and milk and whisk thoroughly. Allow the mixture to rest in a warm, draft-free spot for 10 to 20 minutes.

(2) Whisk in the sugar, oil, 2 whole eggs, 1 egg yolk (reserve 1 white), curry powder, salt and 2 cups of flour.

(3) Continue with steps 3, 4, 5 and 6 as explained in the rye bread recipe. (Note: This bread rises well in the refrigerator.) After forming loaves and placing them in greased pans, cover loosely but completely and refrigerate six to 10 hours. Bake as usual.

Honey Wheat Walnut Bread

A very tasty and filling bread, this has a crunchy, moist texture and a heavenly flavor. This is an unusual bread because of the roasted, beer-simmered wheat kernels and toasted walnuts.

- 1 1/2 cups cracked wheat
- 2 1/2 cups Dunkel Heffe Weiss beer
- 1/2 cup honey
- 2 tablespoons yeast
- 1 cup warm water (or use beer)
- 1/2 cup warm Dunkel Heffe Weiss beer
- 1/3 cup vegetable oil
- 2/3 cup honey
- 1 teaspoon salt
- 1 cup toasted walnuts (see below)

- 6 to 7 cups bread flour
- 1 egg white whisked with 1 to 2 tablespoons warmed honey

(1) Roast the wheat kernels in a 400-degree-F oven, stirring frequently, until golden brown. Combine with the beer and honey. Simmer on low for one hour, covered. Uncover, raise the heat slightly and simmer an additional hour or until most of the liquid has been absorbed. Remove from heat and allow to cool completely.

(2) Place 1 cup of flour in a large bowl. Stir in the dry yeast and pour in the warm water and beer, whisking thoroughly. Cover and allow to rest 15 to 20 minutes.

(3) Whisk the oil, honey, salt, walnuts and cooked wheat into the yeast mixture. Begin stirring in the flour 1 cup at a time, using your hand when the dough becomes too stiff to stir.

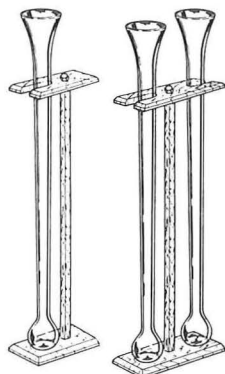
(4) Continue with steps 3, 4, 5 and 6 of the rye bread recipe.

Toast walnuts in a 350-degree-F oven for 12 to 14 minutes, stirring frequently.

Candy Schermerhorn lives in Phoenix, Ariz., and is the culinary consultant and instructor at Kitchen Classics. Candy takes great joy in educating the public about beer and its culinary potential through her cooking classes. This enthusiasm for homebrew cooking has prompted her to begin writing a full-length cookbook devoted to the art and joy of cooking with beer.



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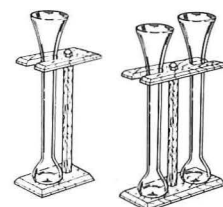
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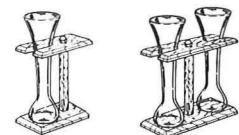
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Step into the CompuServe Beer Forum Libraries

BILL CRISAFULLI

Want to find a few Oktoberfest recipes? Need to find the brewpub nearest your next vacation destination? Thirst for tips on how to improve your brews? Then grab your keyboard, boot your computer, power the modem and check out the AHA Beer Forum on CompuServe. There's a carboy chock full of information available in the Beer Forum's library.

Past issues have shed some light on the CompuServe Beer Forum for information on navigating around CompuServe (refer to Russ Wigglesworth's article in *zymurgy* Winter 1990 (Vol. 13, No. 5)). Contact the AHA for the free introductory CompuServe information kit which includes more than one hour of free access to the Beer Forum. The forum has three parts: message areas, file librar-

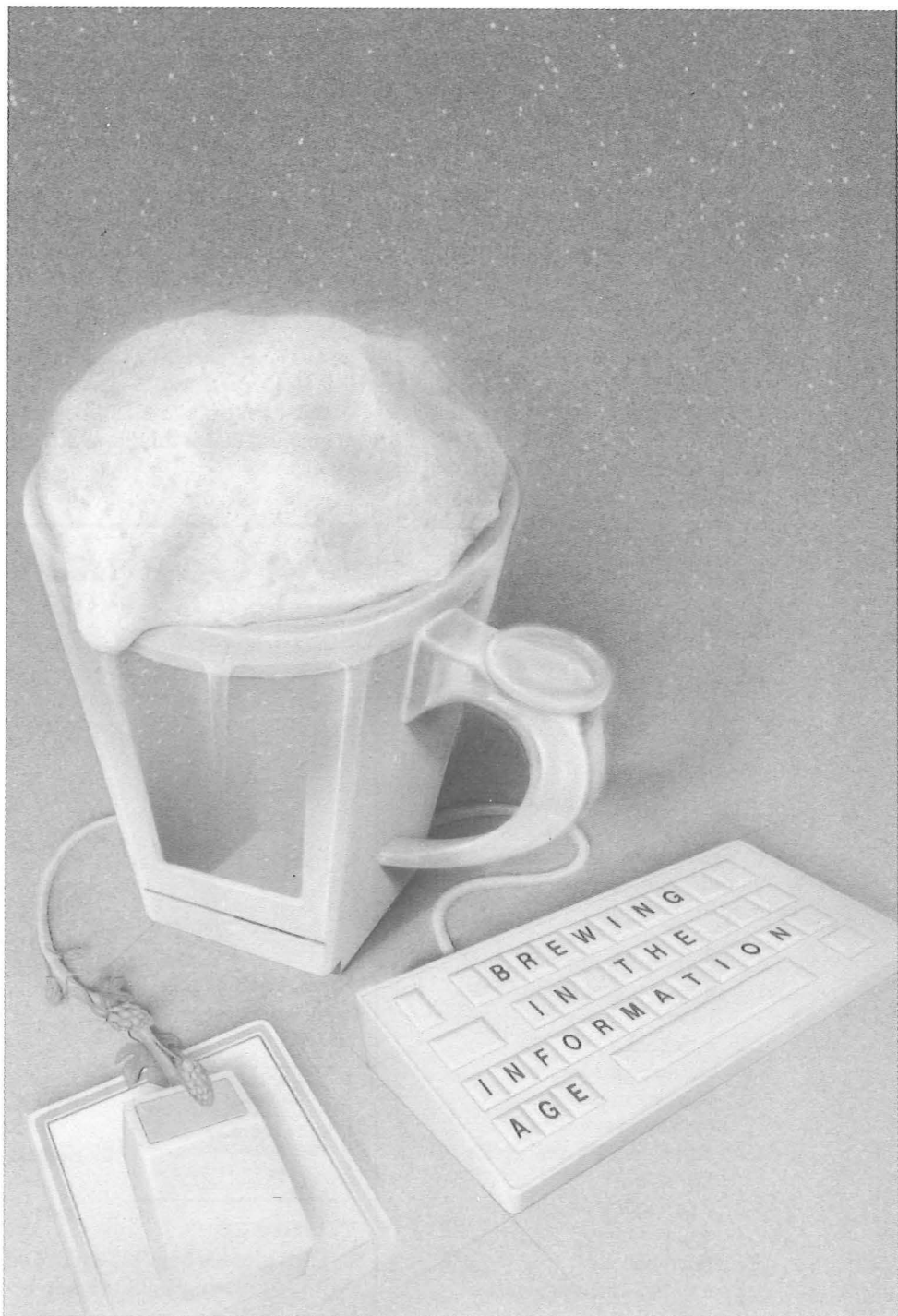


Illustration by David Upton

Accessing the Files

by Brad Krohn

Tapping the combined experience of hundreds of homebrewers and the AHA is as easy as accessing CompuServe's Beer Forum libraries. Everything from the hows, whys and wherefores of making better brew to lists of suppliers and contests are within the reach of your fingertips.

Think of the libraries (there are three) as an extension of your homebrew bookshelf. Once you've checked out the offerings, you can keep the information for future reference.

For the message area of the Beer Forum, you can select a library by typing the appropriate LIB number: LIB13 contains topics related to the homebrew clubs, the AHA and zymurgy; LIB 14 covers general homebrewing topics; and LIB15 deals with commercial beers, microbreweries and brewpubs.

CompuServe is best accessed with one of the so-called "autopilot" programs that allow you to access automatically any or all of the libraries. Most of the programs such as CIM, TAPCIS and Navigator let you set the options described below while off-line, similar to the way you can read and write forum messages.

Once you've found the one library that suits your interest — or all three of them — you need to see what's on the bookshelves. But unlike using a regular library's packed card catalog, CompuServe gives you the power to go right to the shelves.

You can look at the titles with any of the key library commands; BROWse, DIRectory or LISt. While you're still new to using the LIBraries, it's best to stick with BROWse because it provides the most information about each file.

To further narrow your search, you can specify the name of the item you're looking for (messages often alert Beer Forum participants about newly added files), search for a keyword or topic like "yeast," or tell CompuServe to show you only files put on-line within a specific time period.

Those who know as much about hard drives as homebrew (and that VGA doesn't mean "very good ale") also might want to search by the file type. Some very good GIF graphics of homebrew labels have been uploaded in the past.

You can even combine all of these search criteria to get just what you want. Here's how:

BRO LIB:13 would list all of the files in Library 13 and BRO LIB:13, 14, 15 would show you every file in all three libraries. By adding another search criterion such as:

BRO LIB:13 KEY:KEG you would see a list of all files that have "keg" in their keyword summary in Library 13 (or by using LIB: 13, 14, 15 you could check all three libraries). It's also possible to use "wildcards" if you're not sure of the keyword. Specifying something like:

BRO LIB:13 KEY:KEG* would find not only files with keys containing the word KEG, but also KEGS or KEGGING. This expands your search slightly and makes sure you don't miss any of the appropriate information. If you want only the information about the topic that's been uploaded in the last month you might also specify:

BRO KEY:KEG* LIB:13 AGE:30 which asks CompuServe to BROWse for files with the keyword KEG* in LIBrary 13

that have been put on-line in the last 30 days. Particularly useful or popular files stay in the libraries for a long time and you won't want to look through them every time you go into the library unless, of course, you're looking for something specific that you've seen before.

Use as many or as few search criteria as you like. After a few tries, you'll be able to ask for only the files you want. The autopilot programs also help. Many accomplished users check the libraries periodically, just to see what's new since their last visit (BRO LIB: 13, 14, 15 AGE:14 would show you all of the new files in the beer libraries in the last two weeks). The result will be one or more file listings like this:

[76100, 603] LIB: 14
CHILHZ.TIP/Asc Bytes: 8646,
Count: 28, 17-Oct-91
Title: Chill Haze Tip Thread
Keywords: CHILL HAZE TIP
THREAD HOMEBREW

This is a capture of a recent homebrew forum thread concerning the causes and prevention of chill haze in homebrewed beer. It may not be the last word, but for a new brewer such as myself it was helpful. After seeing the description, choose how to retrieve the file in your computer. Simple text (written) files can be "captured" using nearly all communications programs. But you'll need one of the autopilot programs or more sophisticated software to download and use other files. Included in this group are files that have been compressed or "archived" and the graphics of homebrew labels (they will need to be "uncrunched" with a readily available utility program before you can read them). CompuServe has on-line help and several books available if you're not familiar with these areas.

ies and conference rooms. This article will focus on the library areas, where you'll find a barley field full of valuable information on beer and brewing.

Information for all types of brewers from novice to intermediate to advanced is available on-line. I find that asking questions on the forum usually is the most effective way of learning about beginning brewing techniques. There are many good files for novice brewers. FIRST.AHA (LIB 14, 7KB) is a short article from the AHA that out-

lines how to get started brewing (LIB 14 means the file is in library 14, and 7KB means the file is about 7 kilobytes of data; see sidebar). GLOSSA.TXT (LIB 14, 16KB) is a glossary of beer and brewing terms for beginning homebrewers.

One of the more recent additions to the library are TIP threads. In CompuServe lingo, a thread is simply a collection of messages that concern a particular subject. System Operator Robin Garr will start a thread and

forum participants add their comments and perspectives in reply. This information is then edited and posted in the library. One such file, SANIT.TIP (LIB 14, 13KB), is a message giving members' tips on sanitation. If you are having trouble getting nice clear beer, check out CHILHZ.TIP (LIB 14, 8KB), a thread describing the cause and prevention of chill haze.

Another computer network, Internet, is a global network connecting businesses, government agencies,

colleges and universities. Users at these institutions have created "digests" similar to the threads on CompuServe. Messages related to the digest topic are sent to a central address to be included in the next day's combined mailing, which goes to a huge list of users worldwide. Of chief interest to homebrewers are the homebrew digest, lambic digest, and hard cider digest, which are mailed to CompuServe and posted in the Beer Forum library area. Because the files are numbered sequentially as they come in, you'll need to find out the recent digest filenames (see sidebar).

Are you looking for some interesting recipes? Try EGYPT.TXT (LIB 14, 6KB), which contains recipes for an ancient Egyptian brew, a sorghum molasses beer called "Mother Damnable's Extra Peculiar Indiana Pale Ale" and a Ballentine Ale approximation. How about coffee-flavored beers? COFFEE.BRU (LIB 14, 4KB) contains two recipes with coffee as an ingredient. Want to brew a mead? MEAD.DRF (LIB 14, 3KB) has three delicious and easy-to-brew mead recipes from Dan Fink, noted meadmaker extraordinaire.

A nice pasta dinner cries out for a garlic beer and the recipe is in file GARREC.TXT (LIB 14, 2KB). How about recipes that use beer as an ingredient? Lon Hall has created and uploaded a complete cooking-with-beer book. Each of 13 files covers a different category of cooking, such as main course or dessert. These files are stored in CWB01.TXT through CWB13.TXT (in LIB 15, various sizes).

Two files aid in learning how to evaluate beers. WHEEL.BRU (LIB 14, 3KB) is the "Beer Flavor Wheel," a detailed list of flavor and aroma descriptors arranged in an easy-to-use format. DR. (LIB 14, 4KB) explains how to host a "Dr. Beer" tasting. By adding various substances to beer or handling it in a certain way you can learn what diacetyl, oxidation and other defects taste like. This information is the first step to take to improve your brewing techniques.

Copies of instructional pamphlets from the AHA also are available in the Beer Forum. STCLUB.AHA (LIB 13, 5KB) explains how to start a homebrew club. TEACH.AHA (LIB 14, 13KB) is a step-by-step guide to teaching a homebrew class. SPMALT.AHA (LIB 14, 4KB) teaches how to use specialty malts and grains and how to substitute for malt extracts.

Also available from the AHA are recent *zymurgy* articles and tables of contents. FALL91.TOC (LIB 13, 1KB) lists the *zymurgy* Fall 1991 (Vol. 14, No. 3) table of contents and FALL91.SAN (LIB. 13, 16KB) contains the full text of Quentin Smith's cover story on sanitation. The AHA Calendar of Events and Competitions is contained in the file CALEND.AHA (LIB 13, 7KB) and a list of AHA-affiliated homebrew shops is in SHOPS.AHA (LIB 14, 10KB). ZINDEX.AHA (LIB 14, 24KB) contains an index of all *zymurgy* issues from 1978 to 1990.

If you're a member of a homebrew club, perhaps you would be interested in reading the newsletters from other clubs. OCT91.ARC (LIB 13, 8KB) is the Quaff Homebrew Club's October 1991 newsletter. IBU.SEP (LIB 13, 3KB) is the September 1991 Ithaca Brewers Union Newsletter. And MASH01.TXT (LIB 13, 10KB) is the newsletter for the New Jersey MASHer's Club, the MASHers' Bulle-

tin. Find out what activities other clubs are doing and get some ideas to improve your club's meetings and newsletters. As with the digest files, search using the appropriate keyword to find the most recent newsletter file names.

Information on brewing equipment is plentiful in the forum library. Chilling wort quickly is a good practice that will increase the quality of your beer. CHILL.TIP (LIB 14, 21KB) and COOL.TIP (LIB 14, 4KB) are tip threads about chilling wort and the relative merits of immersion and counterflow chilling. CFLWCH.ARC (LIB 14, 23KB) contains the instructions for building and using a two-stage counterflow wort chiller. Plans for Rodney Morris' Recirculating Infusion Mash System (RIMS), featured in a *zymurgy* article, are available in the file RIMS.ARC (LIB 14, 36KB). RIMS is an electronically controlled mashing system for homebrewers.

Detailed information on kegging beer is hard to come by unless you know someone already kegging their own. The library again comes through, with KEG1.ARC (LIB 14, 6KB) and HOWTO.KEG (LIB 14, 3KB). The information in these files answers most of the usual questions that new keggers post.

The dramatic improvement that liquid yeast cultures give to homebrewed beer has sparked a lot of questions on its use. WYEAST.TXT (LIB 14, 9KB) provides a detailed technical report on Wyeast liquid yeasts, giving information such as optimal fermentation temperatures and attenuation for each strain. YEAST. (LIB 14 2KB) gives simple instructions on yeast washing for the homebrewer, allowing yeast to easily be reclaimed from one fermentation, cleaned and reused in a subsequent batch. And YEAST.CHI (LIB 14, 9KB) explains how to culture Chimay and other yeast from bottle-conditioned commercial beers.

Maybe you're about to head out on a trip and are wondering where to find brewpubs and microbreweries. The Beer Forum's favorite brewpubs and micros in California, Oregon and Michigan are listed in PUBS.TXT (LIB 15, 5KB). Bob Ostrander has contributed TREK.OST (LIB 15, 20KB), a chronicle of his brewpub tour through

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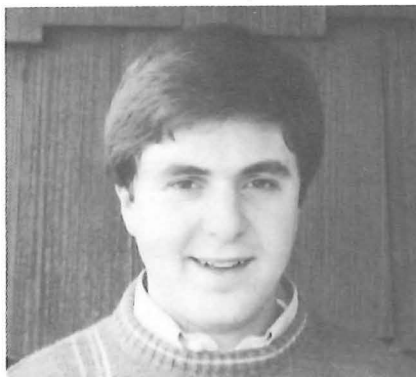
New Mexico, Arizona, Nevada, Utah, Iowa and Illinois.

The range of technical information available covers many different subjects. A debate over the use and safety of aluminum brewpots is in ALUM.BRU (LIB 14, 16KB). The International Bittering Unit Calculator that automates the calculating of recipe bitterness from *zymurgy* 1990 Special Hop Issue (Vol. 13, No. 4) can be found in IBU.ARC (LIB 14, 12KB). And a highly technical discussion of how beer becomes lightstruck is in SKUNK.BRU (LIB 14, 4KB).

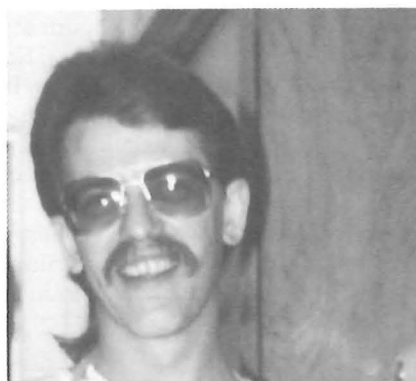
Another feature of the CompuServe forums are conferences, which allow members to chat on-line interactively via their keyboards. Regular conferences are held and transcripts posted shortly after. Michael Jackson participated in a conference at the 1990 AHA National Conference. On-line tastings have been held where members brew the same recipe, ship a bottle to a group of members, and then everyone gets on-line and tastes each beer. Commercial beers are included in tastings and often the brewer will be on-line to answer questions about the beer. Transcripts of many of these conferences are available in files such as 1009CO.SCR (LIB 15, 10KB), an on-line tasting of Anchor Steam, Ale and Porter, or 0130CO.SCR (LIB 15, 27KB), a transcript of a conference on Belgian beers.

Various other reference information is readily available. One favorite reference is an index to Charlie Papazian's *The Complete Joy of Home Brewing*. CJHBIN.TXT (LIB 14, 15KB), BEERRE.ASC (LIB 14, 5KB), and INDEX.TXT (LIB 14, 23KB) are all available index files for the book. And a keyboard index for Michael Jackson's 1991 *Simon and Schuster Pocket Guide to Beer* is contained in the file JACKSN.ARC (LIB 15, 26KB). Other interesting reference files are a beer book bibliography, BIBLIA. (LIB 14, 12KB), a list of North American microbreweries from the Institute for Brewing Studies, MICROS.IBS (LIB 15, 20KB), and a beer date decoder, DECODE.PS (LIB 15, 47KB), a PostScript file which, when printed on a PostScript printer, creates a card that decodes the bottling dates for some brands of beer based on notches on the edge of the bottle's label.

Accessing all this information is easy. You can get a complete listing of all the files in the library by downloading the file ALLIB.ARC (LIB 14, 9KB). It contains filenames and online subjects to help you select the articles and programs you want to download. The libraries on CompuServe are dynamic; some of these files may be removed or updated while new ones are added all the time. By the time you read this article, some of these files may not be available but others will have taken their place. The Beer Forum on CompuServe is a valuable brewing resource for computer users. So get on-line and get smart! 



Bill Crisafulli, a systems consultant living in Chicago, has been homebrewing for two years and is an AHA member. He is a regular participant in the CompuServe Beer Forum, where he has learned just enough about brewing to be dangerous.



A homebrewer for three years and an AHA member, Brad Krohn is a technical writer and former journalist for the Associated Press. Although he's moved to Oregon, he still belongs to the North Texas Home Brewers Association and edits their newsletter.



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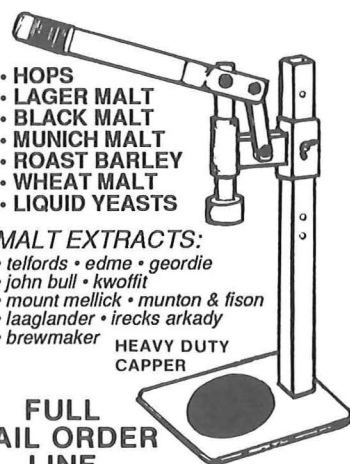
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and are starting to feel like a homebrewing hotshot. You explain to your non-brewing friends there is no difference between beer and ale, that ale is a type of beer. There are differences between ales and lagers. They're very impressed, both with your knowledge and with your brew.

But you've received scores from the National Competition, or from other competitions, and you didn't win. Not only did you not win, but the judges said your beer didn't even belong in the category in which you entered it. Yet it was a great beer. You loved it and all your friends loved it, too. But, said the judges, it wasn't a great Oktoberfest—too light in color, not enough body and too bitter.

October is coming around again and you want to brew the perfect Oktoberfest. How do you get the color just right? How do you get the right original gravity? How do you make sure the beer isn't too bitter?

To begin, you go to your homebrew supplier and tell him or her that you are brewing an Oktoberfest with Munich and Vienna malts. "How much Vienna malt would you use in an Oktoberfest?" you ask.

"What's your extraction rating?" asks the homebrew supplier. You're lost. You don't know what an extraction rating is, let alone what yours might be. You mumble something about not being sure. The supplier says, "Let's assume 1.025. The extraction rating for Vienna is usually a little low." He then asks, "How big a batch are you making?" You tell him five gallons and he does some hocus-pocus with the calculator and says, "Almost 11

$$\begin{array}{r} 27.8 \\ 0.5 \\ \times 31 \\ \hline \end{array}$$

pounds, if you want a gravity of 1.054." You thank him and wonder what he knows that you don't.

The expected gravity that one pound of grain would give when mashed and sparged to collect one gallon of runoff is the extraction rating. When the shopkeeper assumed an extraction rating of 1.025 he was saying that if you make a one-gallon batch of beer using one pound of Vienna malt, your beer would have an

original gravity of 1.025.

For information on original gravity ratings for different beers, see Fred Eckhardt's *Essentials of Beer Styles*, Michael Jackson's *New World Guide to Beer*, Charlie Papazian's *New Complete Joy of Home Brewing* or the AHA competition style guidelines. These sources also will provide you with information on color ratings and International Bittering Units.

The shopkeeper knows you want to make an Oktoberfest with starting gravity of 1.054. To determine how many pounds of grain are needed, he uses this formula:

$$\frac{(\text{original gravity} - 1) \times \text{number of gallons}}{(\text{extraction rating} - 1)} = \text{lbs. of grain}$$

In this instance:

$$\frac{0.054 \times 5}{0.025} = 10.8$$

To determine your extraction rating, rearrange this formula to read:

$$\frac{(\text{original gravity} - 1) \times \text{number of gallons}}{\text{lbs. of grain used}} + 1 = \text{extraction rating}$$

Next time you will know what your extraction rating is. Remember, you will experience different extraction ratings using different malts. Highly modified two-row barley malt may provide a yield of up to 1.030. A typical extraction rating is 1.028. Vienna malt will yield approximately 1.025, while crystal malt will be around 1.020.

A similar formula will work with malt extracts. Most extract syrups have an extraction rating of approximately 1.033 to 1.035. This means that one pound of malt extract will make one gallon of beer with a gravity of 1.033 to 1.035. One pound of dried malt will make one gallon of beer with a gravity of around 1.038 to 1.042.

"Of course," the shopkeeper says as you grind the sixth pound of grain, "that will give you a pretty light-colored Oktoberfest. You should add some Munich malt."

Way ahead of the game you say, "I plan to."

"Great," he says, "how much?"

You're stumped again.

"You want a color rating of about 12," he says. "The Munich malt is rated at 10, the Vienna at 4. Seven pounds of Vienna plus 3 1/2 pounds of Munich will give you a color close to 12. That should keep your gravity at 1.054, close to your target."

Malts are rated according to their color on the Lovibond scale, which ranges from 1 (the lightest) to 400 (the darkest). One pound of malt with a color rating of one, mashed and sparged to give one gallon of runoff will produce a beer with a Lovibond rating of 1. If Vienna malt is rated 4, that means that one gallon of beer made from one pound of Vienna malt will have a color rating of 4.

Your supplier used this formula to figure out how many pounds of Vienna malt to add to your beer:

$$\frac{(\text{lbs. of malt A} \times \text{color rating}) + (\text{lbs. malt B} \times \text{color rating})}{= (\text{gallons of beer}) \times (\text{color of beer})}$$

You are brewing five gallons of beer with a color rating of 12. Therefore, one-half of the equation is 63. Munich has a rating of 10 and Vienna 4. Your brewshop owner used different combinations such that the pounds of Vienna times 4 plus the pounds of Munich times 10 equaled 63. At the same time, he was trying to keep in mind the effects that substituting Munich malt for Vienna malt would have on the finished beer and on the original gravity. He found that seven pounds of Vienna plus 3 1/2 pounds of Munich would have a total color of 12.

To determine whether a particular combination of grains will produce the desired color, rearrange the above equation to produce the following:

$$\frac{(\text{lbs. of malt A} \times \text{color rating}) + (\text{lbs. of malt B} \times \text{color rating})}{\text{gallons of beer}} = \text{color of beer}$$

This formula also will work for extracts. A light malt extract will have a color rating of approximately 6. Again,

your supplier should be able to tell you the color rating of the malt.

You've ground 10 1/2 pounds of grain and done more math than you have since the 10th grade. You've broken into a slight sweat and are wondering whether any of the homebrew at home is ready for drinking. You want to pay for your purchase and go. "How much do I owe?" you ask.

He tells you and adds, "It's going to be a pretty sweet Oktoberfest isn't it? Don't you want any hops?"

"Oh, yeah. What would be good?"

"You want about 25 IBUs," he says. "What's your utilization rate?" Great, more questions.

"Utilization rate? I plan to use them all," you say facetiously.

Brewers calculate the bitterness of brews by measuring the amount of bittering material, including alpha acids (AA), dissolved in a given quantity of beer. One gram of bittering material dissolved in one liter of beer is one bittering unit. An Oktoberfest will have approximately 25 IBUs.

To determine IBUs, use the following formula:

$$\text{IBUs} = \frac{\text{AA\%} \times \text{number of grams used} \times \% \text{ utilization}}{\text{liters of beer brewed} \times 10}$$

To convert this formula to more common measurements:

$$\text{IBUs} = \frac{\text{AA\%} \times (\text{number of ounces used} \times 28.4 \text{ g/oz.}) \times \% \text{ utilization}}{(\text{gallons brewed} \times 3.78 \text{ L/gal.}) \times 10}$$

For your Oktoberfest you want to use Hallertauer hops and achieve a final bitterness of 21 IBUs. Assuming you will make only one hop addition, you will rearrange this equation to determine the ounces of hops. It will read:

$$\text{ounces of hops} = \frac{\text{IBUs} \times (\text{gallons} \times 3.78 \text{ L/gal.}) \times 10}{\text{AA\%} \times \% \text{ utilization} \times 28.4 \text{ g/oz.}}$$

This translates to:

$$1.2 = \frac{25 \times 5 \times 3.78 \times 10}{5.5 \times 25 \times 28.4}$$

Alpha-acid ratings usually are listed on hop packages. If not, your homebrew supply shop will be able to tell you what the ratings are. Ratings vary from low of 3.0 percent (usually "noble" hops) to a high of 13.0 percent to 14.0 percent (high alpha U.S. hops). Extraction ratings are measured on a percentage scale also, ranging from 0 to 100 percent. Boiling hops for 60 minutes will typically provide a 25 percent utilization rating. Boiling for 30 minutes will yield a 10 to 15 percent rating, and so on. If your beer turns out to be too bitter using this scale, you may have to adjust your utilization rate. It is unusual to have a utilization rate above 30 percent or below 22 percent in a 60-minute boil. The amount of liquid boiled (more liquid leads to higher extraction) and the vigor of the boil (the more vigorous the boil the higher the extrac-

TABLE 1. MALT USAGE

COLOR (1 lb/1 gal)	ENZYME ACTIVITY	TYPE	PROPERTIES	USES
2.2	high	Pilsener-6-row	light maltiness	lagers, Pilseners, with adjuncts
2.0	high	lager-2-row	light maltiness	all-malt beers, European lagers
2.2	high	wheat	grainy, wheaty	10 to 30% Belgian light beers 30 to 60% wheat beers
3.0	high	pale (ale)	fuller maltiness	main British ale malt
4.0	medium	Vienna	flavor, color, aroma	Dortmunder, pale bock
4.2	medium	mild ale	dry, malty, color	mild & brown ale, dark ales
10.0	medium	dk. Munich	aromatic, malty, color	5 to 20% golden & amber lagers 25 to 50% Munich dark, bock
7.0	none	CaraPils	body, palate fullness neutral flavor	light ales & lagers, with adjuncts 3 to 15%, head retention & body
22.0	none	Caramel-20	color, flavor, fullness	5 to 20%, light ales, lagers & bocks 3 to 20%, sweeter, maltier beers
43.0	none	Caramel-40	caramel flavor & above	bock, Märzen, porter, brown ales 5 to 30%, pale, mild & brown ales
55.0	none	Crystal-2-row	similar to above aromatic, sweet	sweet stouts, porters, old ales 3 to 15%, alt, dark lagers, porter
65.0	none	Caramel-60	strong, harsher European flavor	doppelbock Scottish brown & dark ales, stout
30.0	little	amber	color, biscuit flavor	2 to 15%, old & nut brown ales
65.0	none	brown	smoky flavor, color	2 to 10% bock, porter, stout
400.0	none	chocolate	dark roasted flavor	Oktoberfest, mild ale stout, porter, bock
520.0	none	black	burnt acidic flavor color	color adjustment

Information from *zymurgy* Special Issue 1985 (Vol. 8, No. 4)

tion) are the two main factors influencing the utilization rate.

If you are more comfortable using Homebrew Bittering Units, HBUs can be easily converted to IBUs and back. An HBU equals the bitterness that one ounce of hops at a given alpha acid rating will impart to 5 gallons of homebrew. The equation is:

$$AA\% \times \text{ounces of hops} = \text{HBUs}$$

If you want to know how many HBUs are necessary to match a given quantity of IBUs, you can rearrange the IBU formula above to get:

$$\frac{\text{IBUs} \times (\text{gallons} \times 3.78 \text{ L/gal.}) \times 10}{\% \text{ utilization} \times 28.4 \text{ g/oz.}} = \text{ounces of hops} \times AA\%$$

The right side of the equation is the HBU formula. We are assuming a five-gallon batch and a 25 percent utilization rate. This becomes:

$$\frac{\text{IBUs} \times (5 \times 3.78) \times 10}{25 \times 28.4} = \text{HBUs}$$

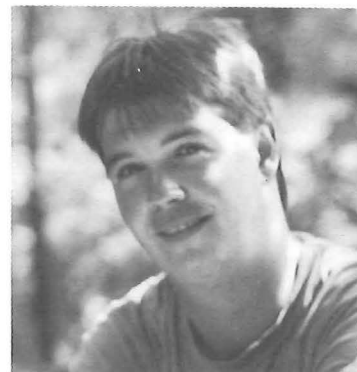
This means that if you know a beer needs 25 IBUs you can convert this number to HBUs by multiplying 25 by 0.27. A five-gallon batch of beer with 25 IBUs will need 6.7 HBUs. To convert the other way, 1 HBU will equal 3.7 IBUs.

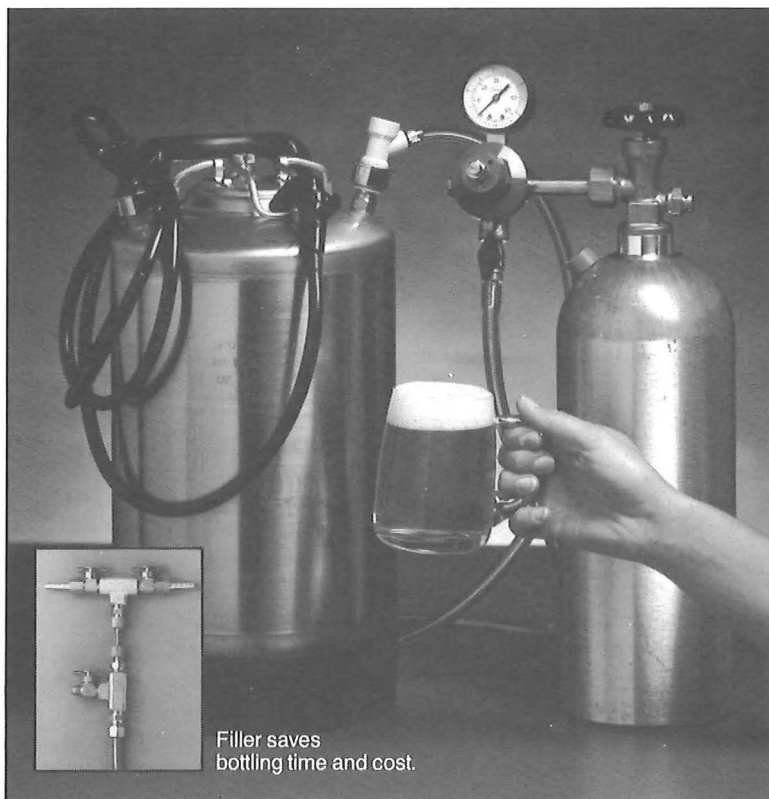
These numbers all assume a five-gallon batch. You can figure a conversion equation by simply substituting three gallons or six gallons for five gallons in the equation.

Now you know all the math you need to know to brew any of the world's classic beer styles. But you can do more than simply attempt to match a style of beer. You can develop your own style from the ground up. Having a basic idea how your new creation will look and taste may save you hundreds of experimental batches.

Of course math is no substitute for knowledge of different malts, fermentation procedures and a host of other factors. But these simple equations will give you a good start toward a recipe that could become the perfect classic beer style. Or maybe you'll create the perfect new great American beer style. ☐

Jim Hilton studies law at Boston University and works as a consultant to the state legislature's taxation committee. He designs homebrew recipes for Barleymalt & Vine in West Roxbury, Mass.





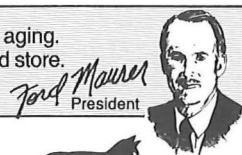
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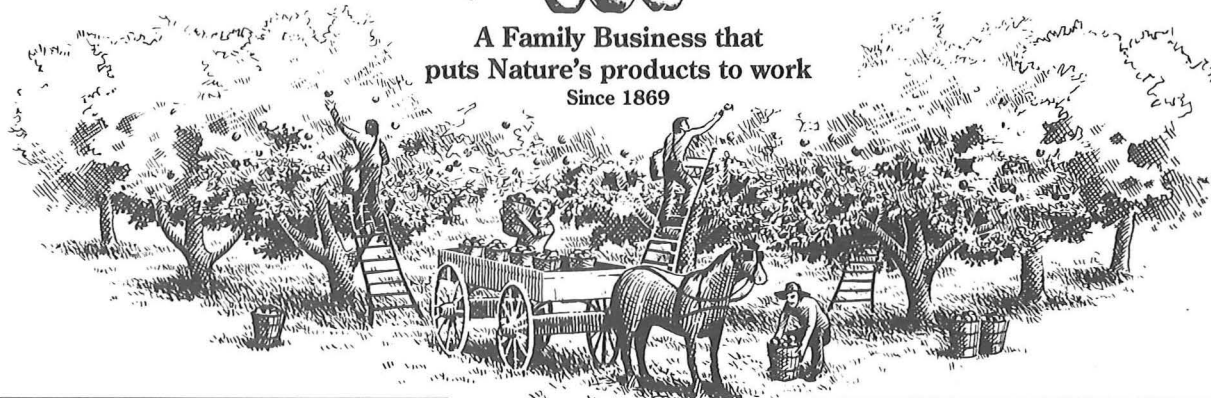
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Wort Chillers: Three Styles to Improve Your Brew

At a recent meeting of the Dayton Regional Amateur Fermentation Technologists (DRAFT), one member demonstrated his whiz-bang high-performance wort chiller along with designs to produce an even more efficient model. During the demonstration the query arose from the novice brewers assembled: "So what's a wort chiller and why do I need one?"

This is a question that merits considerable attention. We need to step back and fill in the blanks, so to speak, or risk leaving newcomers and novice brewers in the dark and possibly discouraged by the apparent complexity of the craft. Remembering that it wasn't so long ago that we were novice brewers, we'll concentrate here on wort chillers.

A cursory literature review is in order. Let's start with the all-time great question: "Why?" John Alexander in *Brewing Lager* states: "Rapid cooling of the wort is deemed

essential for the following reasons: to achieve the 'cold break,' to aerate worts, to rapidly lower the temperature so that yeast can be pitched and to reduce the chances of bacteria attacking the brew." Virtually any useful book on homebrewing says this in one way or another. Books suggesting the indiscriminate use of cane sugar, open fermenters, boiling yeast or hydrometer gymnastics are *not* considered useful.

One aspect of the cold break is to force proteins to coagulate and drop out of solution to prevent chill haze from forming in the lighter-colored brews. The effects are largely esthetic in nature and only count if you're grossed out by hazy beer or stand to lose a few appearance points in competition. Stouts and porters do not suffer from this effect because opaqueness hides the haze and the robust flavor subdues the more subtle off-flavors.

The next question usually is, "Do I have to chill my wort quickly?" The best answer to this is: "It depends." Most folks start with malt extracts to facilitate the "incremental success approach" to brewing; i.e., start simple, see how you do, then get fancier if you like the beer and wish to fine-tune your recipe or methods. If not using a full-wort boil, putting the wort into the primary fermenter with a couple of gallons of cool water then into a sink of ice water probably will get the chilling job done in 15 to 30 minutes.

However, a full-wort boil, light-bodied and light-colored styles are more sensitive to off-flavors. In his excellent book *Principles of Brewing Science*, George Fix explains how critically sensitive whatever may be suspended in the wort becomes to staling and oxidation. Dave Miller notes in *Continental Pilsener*: "Several pieces

of equipment are particularly important in the brewing of Pilsener beer. One is a whirlpool or some other means of separating the trub (suspended proteins) from the boiled wort. Another is a wort chiller, which gives a rapid drop to pitching temperature. The clean taste of this beer style depends on a good cold break and trub removal." Thus, the cold break and not shocking the yeast by adding it to hot wort are very important to lagers and the lighter styles.

Now you're ready to consider adding a wort chiller to your brewing process. Here's some information on what can be purchased and constructed.

Three wort chiller designs currently are popular. The two immersion types are seen more often than the counterflow type. They come in two varieties, depending on how you use them: (1) a copper coil with cold water running through it, to be immersed in the hot wort, and (2) a copper coil with the boiling wort flowing through it, to be immersed in ice water.

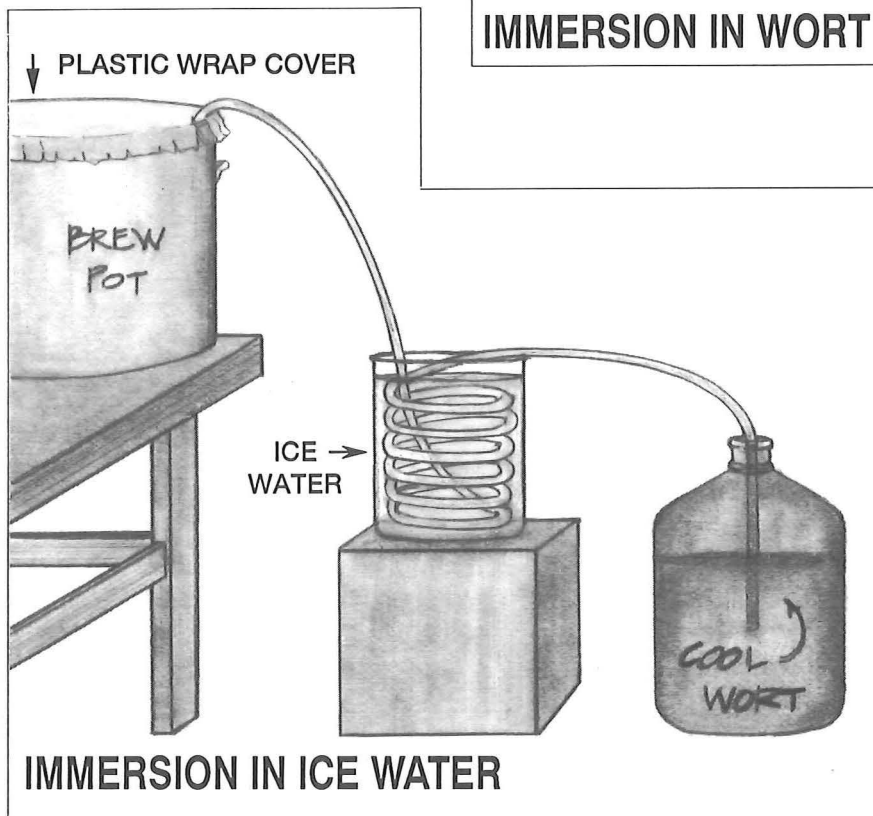
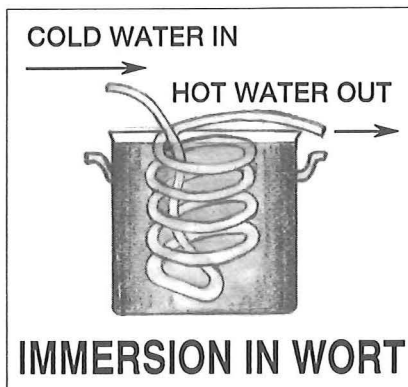
The third type is a counterflow wort chiller—cold water flowing through a jacket that surrounds the copper tube carrying the wort. The water and wort flow in opposite direction, hence the name counterflow, to provide the greatest temperature differential.

Each type has unique advantages and drawbacks. The two immersion types are far easier to make, but can take longer to cool because of the formation of thermal layers. However, with immersion types constructed in a coil resembling a large spring, gentle compression of the spring reduces the layering effect and facilitates cooling.

The counterflow and immersion-in-ice-water types generally are more efficient, but need a good organic cleaner to prevent contamination of



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to room temperature in a sink of ice water can take an hour but a wort chiller of any type will reduce the time to less than 15 minutes. The result: you'll have more time to brew or, even better—sit back, relax and have a homebrew!

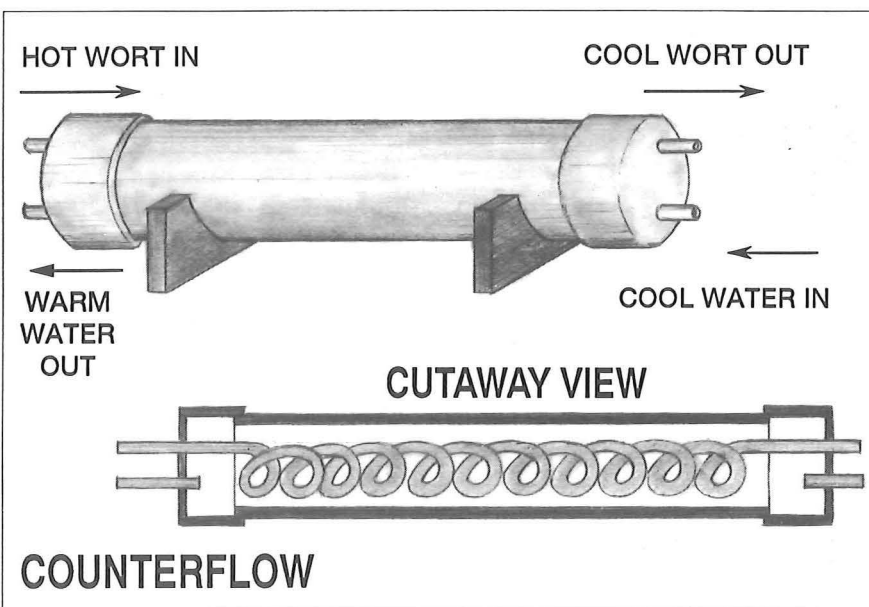
For what it's worth, the choice of wort chilling style is largely a matter of taste and of how much time and money you're willing to invest. After all, the point is to chill out and brew the kind of beer you like. ☐

Ross and Mindy Goeres have been a homebrewing team for about three years. Ross is an electrical engineer in the U.S. Air Force. Mindy, a student and economics assistant, is a Recognized Judge in the Beer Judge Certification Program. When not brewing or "rehabbing" their old house in Belleville, Ill., they are often traveling in search of beers to be tasted.

your beer. Because you can't see the inside of the tubing that will be in contact with your beer, cleaners such as trisodium phosphate (TSP) or clean-in-place (CIP, used by dairy farmers) are required to clean the inside of the copper tube.

By comparison, the immersion-in-wort type can be sterilized by placing it in the brewpot several minutes before the end of the boil. The inside doesn't have to be scrupulously clean because only cooling water flows through. (Note: substitute stainless steel for copper if it is available and you know how to work with it. Don't even *think* about using aluminum!)

Aside from improving flavor and clarity, the advantage of using a wort chiller is the time saved in cooling your wort. Cooling a covered brewpot



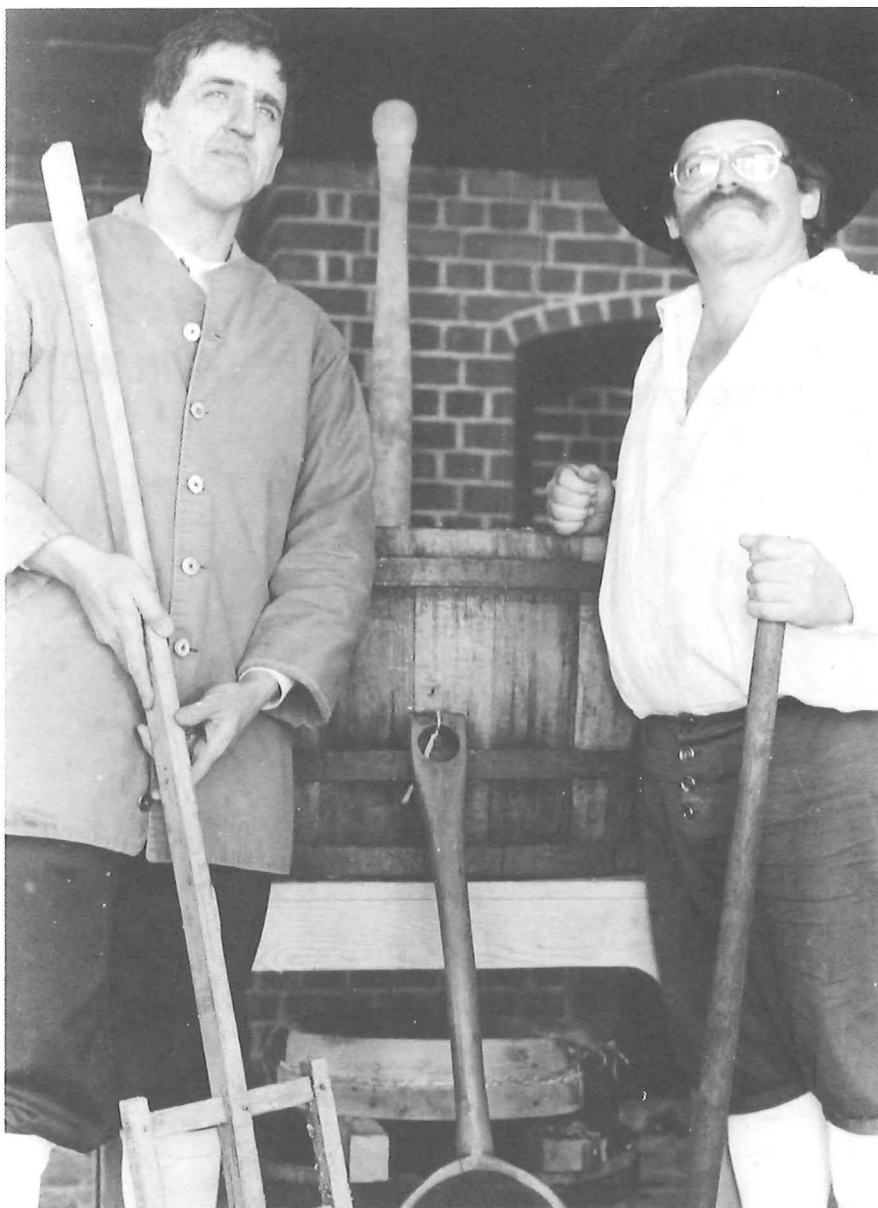
Illustrations by Regina Sikora

Brewing the 17th Century Way

RICH WAGNER



Rich Wagner "bailing" hot water from kettle to receiver in order to mix with cool water for mashing.



Resolute brewers Dan Brosious (left) and Rich Wagner are proud demonstrators of 17th century brewing at Pennsbury Manor in Morrisville, Penn.

W

how would have thought, more than 50 years ago when the Works Project Administration rebuilt William Penn's mansion and estate, that anyone would ever brew beer in the brew house? For years baking has been done in the open hearth and ovens, soap and candles made and even the laundry has been fired up. But not until October 1990 did the brew house produce a full mash brew using reproductions of 17th-century equipment.

It took the efforts of Clare Lise Cavicchi to begin the brewing program at the manor. As curator of Pennsbury Manor, a Pennsylvania historical site, Cavicchi researched the brewing process and published "Beer-Brewing At Pennsbury Manor" in 1987. Her research was exhaustive and included everything she could get her hands on regarding Colonial brewing procedures, equipment and recipes. She had a vision that one day visitors could see a brewing demonstration.

Cavicchi enlisted New England craftsman Ron Raiselis to fabricate

the necessary equipment. It was a pretty tall order considering she wanted barrels without metal hoops! Raiselis, who had done similar projects for other historical sites, went to work constructing equipment for the Pennsbury Manor brew house. The barrels had bentwood sapling hoops lashed around the staves, but the large wooden tubs had metal hoops.

The stage was set for brewing at Pennsbury. Tom Pastorious of the Pennsylvania Brewing Co. financed the fabrication of equipment and agreed to supply malt.

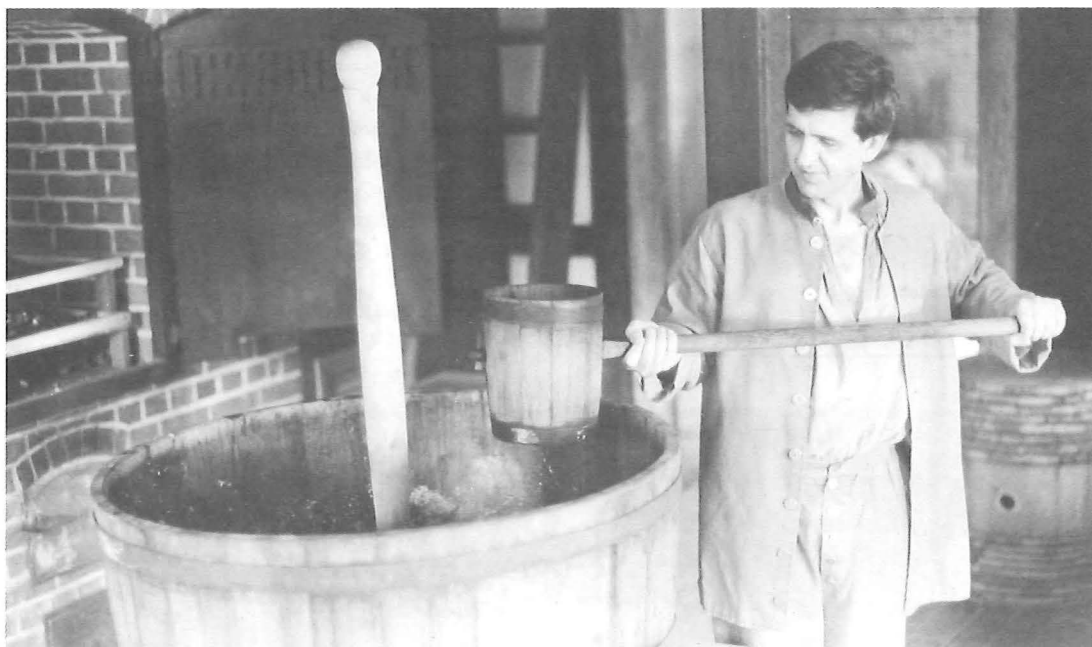
All that was missing was a 17th-century brewer! When I established a hop trellis in the garden at Pennsbury Manor in 1987 I met Cavicchi and the rest of the staff and got her interested in making a batch of homebrew. Her first effort was a brown ale brewed with Pennsbury hops.

In the spring of 1990 the staff contacted me to see if I was up to the task of making beer with their equipment. I accepted the challenge and signed on as a Pennsbury volunteer. Fortunately, my homebrewing partner, Dan Brosious, agreed to assist. The brewing program was about to unfold.

We had to make sure the fireplaces and chimneys in the brew house worked properly. In August I spent a day firing up the kiln and test drying some of the hops. It took about three hours for the bricks in

the kiln to heat up, but once they did, the hops dried in short order. The 30-foot chimney provided an excellent draft and the firebox worked like a charm. We decided to harvest and dry hops in the kiln as a demonstra-

it with water, everything worked smoothly for about two days. By the third day the wood had swelled so much the rivets sheared and the hoops came off on two tubs and the base of the mash tun. Unfortunately the bottom



Dan Brosious using bailer to move water or wort between kettle and mash tun.

tion on Manor Day in September.

In the meantime, I was scratching my head trying to figure out how to use the assorted barrels, tubs and kettles by consulting diagrams and descriptions in Cavicchi's book. We needed a plug for the bottom of the mash tun that could be pulled to drain the wort. Palmer Sharpless, another volunteer and experienced wood turner, drilled the hole and turned the plug on his lathe. It looked like a bed post—tall enough to stand above the hot mash.

Once the mash tun was modified, the next step was to make the various vessels watertight by soaking to swell the wood. After transporting all the equipment to my driveway and filling

also came out! This was a brewer's nightmare. Sharpless and some other woodworkers offered good suggestions, and through trial and error I managed to repair them all, but when the mash tun was filled with water it leaked like a sieve. The solution was to soak the entire tub in a wading pool for three days, whereupon the mash tun was tight as a drum.

Some veterans of the brewing industry remembered working with wooden fermenters. One had even started his career with a wooden mash tun. It was agreed that the fermenter should be coated with a wax-like substance called mammut to make a cleanable surface. The mammut was heated to 300 degrees F (149 degrees

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C) and applied to one stave at a time after each had been heated, but not scorched, with a torch. I fired up the Coleman stove in the back yard and with torch in one hand and paint brush in the other, proceeded to coat the inside of the fermenter.

It was suggested that the barrels be "pitched," a process involving injection of a hot waxlike coating through the bung hole and rolling the barrel around to coat the interior evenly. Fortunately, the Clement Brewery in Vernon, N.J., uses wooden cooperage imported from Germany and operates its own pitching machine. The brewery agreed to pitch Pennsbury's kegs in the interest of brewing history.

It might seem that everything was ready to begin a perfect brew, but not a chance! The manor well is contaminated so another source of water had to be found and water stored for washing, boiling and brewing. It's easy to take hot and cold running water for granted, especially when you need several hundred gallons for a 17th-century brewing demonstration. A totally authentic re-enactment would at least

have relied on the large cistern full of Delaware River water. Because it was important to keep the cooperage wet after delivering it to the manor, I loaded up the two wooden kegs and every container I could find at home and headed for the brew house with about 300 gallons of water. I even had to reload all the containers at a gas station near Pennsbury Manor.

With everything finally in place the demonstration went just fine. Brewing in a copper kettle that fits into a ring over a brick firebox is an unparalleled experience in "cooking." The setup makes brewing with a wood fire a breeze. When homebrewing with a gas grill or burner it takes forever to boil 10 or 15 gallons. By placing 10 gallons in each of the three copper kettles, boiling 30 gallons in half an hour over the wood fire was no problem.

Operating the mash tun was the trickiest part of the process. The recipe called for 100 pounds of ground malt, supplied by Allegheny Brewery. The plug in the mash tun did little to strain the mash as intended, so we had to strain the liquid through a sieve lined with burlap then add it back to the mash. All temperatures were approximated without the help of a thermometer.

Probably the hardest part was transporting large quantities of very hot liquid between rooms and placing the copper kettles in their rings over the brick firebox.

We added Pennsbury hops in cheesecloth bags during the boil. After we removed the kettles from the fire, the wort cooled overnight with a muslin covering over each kettle. The following day the cooled wort was added to the wooden fermenter and the yeast was pitched. Within two days a thick foam formed above the liquid and the fermentation proceeded for about three weeks.

One leaking keg could not be soaked because of freezing temperatures, so the beer was racked to glass carboys. Some was dispensed in a draft system and the remainder fermented for an additional month. The original gravity was 1.080 and attenuated to 1.000, indicating an alcoholic content of about 11 percent. This beer defied category. It was dry and very



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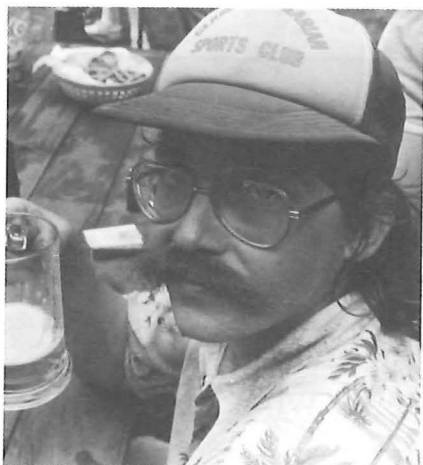
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smooth with light body. To my surprise, it was neither malty nor hoppy. The brew wasn't overly carbonated either, a characteristic I attributed to fermentation in wood. A beer of this type can be stored for several years with no ill effects.

The draft beer, which only went to 1.020, was much sweeter, and it had a strong alcohol flavor. The fully attenuated batch was much drier, with a more subtle alcohol flavor.

To produce the best beer possible, we tried to be authentic and took every opportunity to brew as sterile as possible. Even Colonial brewers scalded equipment to clean it. The industry people, whose consultations were invaluable, were skeptical of brewing with so little control. As a homebrewer who frequently brews outdoors, the quality of the brew did not surprise me. As a student of the history of the Pennsylvania brewing industry, I can think of no greater honor than to be the first to brew beer in William Penn's brew house in the 20th century—17th-century style! 



Rich Wagner has been homebrewing since 1983 and demonstrates Colonial brewing and malting techniques to historical groups. Since 1980, he and associate Rich Dochter have visited more than 400 sites throughout Pennsylvania and verified over 200 brewery buildings still standing. The two have conducted group tours of these buildings and a similar tour for the city of Pittsburgh sponsored by the Landmarks Foundation.

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I call it the "Case of Beer Bottles." At first I was baffled by the whole affair. For weeks, some fiend had been stealing empties from pubs all across the city. I deduced immediately, of

course, that it was the perpetrator's way of keeping track of the brands he liked best. What puzzled me was why the chap didn't simply subscribe to *All About Beer*, the magazine that can clue you in on great beers and fine drinking establishments around the world. For true beer lovers, not subscribing to *All About Beer* would be criminal.

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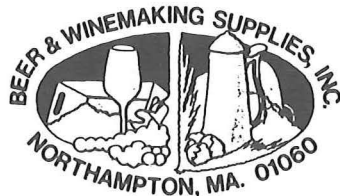
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FOR THE BEGINNER

RUSTY McCRADY

Hopping and Straining



Illustration by John Martin

Imagine Tex-Mex salsa made without any peppers, or Indian food without any curry or a charbroiled steak grilled without any salt and pepper. Such would be the flavor kick of unhopped beer.

While malt provides the richness and flavor depth to beer and ale, it is hops that provide both the zest and zing, along with the spicy aroma of really good beer or ale. A generous hopping rate is what distinguishes most imported beers from underhopped American beers. And hops are a major reason for brewing one's own beer, because the wise use of them enables even the fledgling homebrewer to customize each batch and give it the aroma and character missing from most mass-produced commercial beers.

Hops are simply the green flowers of the perennial vine *Humulus lupulus*. They are available to homebrewers in two forms: whole flowers and pellets. Thus the first choice that confronts the beginning brewer is which form to use. Because of improved processing and airtight packaging achieved in recent years, I recommend pellets, both for boiling and finishing. They are about one-fifth as bulky as whole hops and consist of fine particles whose flavors are

more easily utilized because of increased surface area. Finally, they are much more easily strained at the conclusion of the brewing process, as will be explained later.

Another improvement we brewers have benefitted from over the past several years is the proliferation of hop varieties available from homebrew suppliers everywhere. When I started brewing in 1982, I had a choice of perhaps five varieties, some of which were far from fresh. Nowadays my homebrew shop (Brewmasters) in Rockville, Md., has more than 15 varieties, all fresh and properly sealed, in both whole and pellet forms.

The percent of alpha acid, a crucial figure used to calculate bitterness, varies greatly from variety to variety and even within the variety from harvest to harvest. This figure always is printed on the package label right under the variety's name.

With all this variety available and with each beer kit manufacturer promising that the malt extract already is hopped, the novice brewer can be forgiven for getting a little confused. He or she might well ask, "Do I need to add any extra hops to my recipe? If so, what kind and how much? And when would I add them?"

These are all good questions and their answers are, respectively, "yes,"

"it depends" and "three different times."

As to the question about the need for adding extra hops to already hopped kits, the beginner is advised to look up *any* prize-winning recipe in any *zymurgy* from the last 10 years and note that not one will be found that failed to include added hops for aroma as well as for flavor. Even if a kit contains sufficient hops for bitterness, it simply cannot contain any aroma hops, because these must be added at the end of, or even after, the brewing process. Furthermore, in most cases the addition of some mild flavoring or bittering hops will add some needed zing to your kit recipe.

The rule of thumb for how much hops is to add between one-half and 1 1/2 ounces of mild hops (alpha-acid level 3.5 to 4.9 percent) to a five-gallon recipe, according to one's own personal taste. Thus I must answer "it depends" to the "how much" question because personal preferences and tastes vary and also because kits vary significantly in their hopping rates. See the *zymurgy* Special Issue 1990 (Vol. 13, No. 4) article and chart on kit hopping rates for the specific homebrew bittering units of commercial kits.

Bear in mind that to obtain bitterness and flavor, hops must be boiled


extensively, and to obtain aroma, they should be added at the end of the boil. Thus my answer to the "when would I add them" question: at three distinct intervals—the very beginning of the boil (primarily for bitterness), at the middle of the boil or about 20 minutes from the beginning (for bitterness and flavoring) and at the end of the boil (for aroma). This general rule affords much flexibility. You can add equal amounts all three times for balanced usage, or you can shift much more hopping to either end to emphasize (bittering *vs.* aroma). One caveat,

however: it is much wiser to emphasize aroma if you choose to go to extremes, unless your kit's malt extract is grossly underhopped. I have tasted beers and ales that are simply too bitter. When in doubt, start with balanced usage (three equal doses) then shift as you deem necessary.

A final concern with hops is what to do with the leftovers—the spent hops that constitute the bulk of the "trub" residue at the bottom of your brew kettle after the wort is cooled (while covered) for approximately three to four hours after the boil. This

sediment must be strained out. Here again is a point in favor of pelleted hops. They are much easier to strain than whole hops and provide a good filtering medium for the wort as it is run through a sanitized strainer from the kettle into the fermenting vessel. Your strainer must be of the wire-mesh type. The fine, greenish hop residue will clog the strainer frequently; simply keep emptying it (and later put the hops in your compost pile, if you have one) until the vast bulk of the wort has been strained and added to the fermenter, which should already contain sufficient water to complete your four-or five-gallon batch. Don't worry about recovering every last drop of boiled wort, because some is inevitably sponged up by the spent hops.

Try to do an efficient job of straining out these used hops. They have served their purpose and if transferred into your fermenter they can also get transferred into your bottles, where they are unsightly and undesirable, to say the least. Spent hops can dangerously clog your blowoff hose system (if you use one) resulting in carboy breakage or beer foam everywhere.

One of my greatest joys as a homebrewer has been opening up the first bottle of an untried batch and getting that refreshing shot of Saaz or Tettnanger aroma, followed by the incomparable herbal flavor they impart to my beer. And the best part is I did it myself and so can you. 

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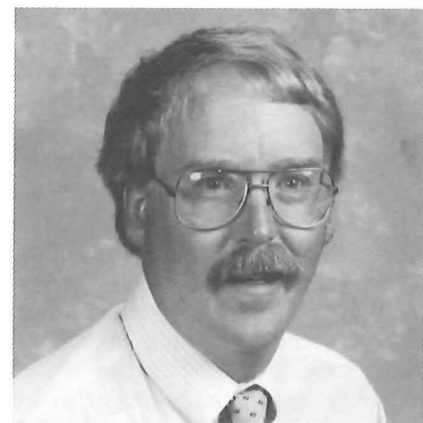
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Rusty McCrady is a high school teacher and homebrewer, not always in that order. He has been brewing steadily since 1982.

WINNERS CIRCLE

JAMES SPENCE



Nothing goes down cooler than a crisp, clean lager on a hot day. Start these recipes now and by July you'll have cooling brews for afternoon get-togethers. Cook up some hot dogs and sauerkraut and tap your keg of European lager for the best picnic ever.

Paddy Giffen's weizen will go great with a dash of lemon after mowing the lawn, and a tall, cool glass of "Deathbed Pils" is just the thing to complement a fresh dinner salad. Four of these recipes took second place at the 1991 National Competition while two brews came in third.

Boston Wort Processor Mike Fertsch beat 34 entries in the Best of Fest club-only competition with his "Mt. McLaughlin Märzen," which was over a year old at judging. If you start your festbier now you can enter it in this year's competition.

For a change try a cream ale or a California common beer. These brews have great fruity overtones with all the cool, quaffability of a lager. The crucial brewing tip for these summer beers is to keep 'em cool.

BAVARIAN DARK

Munich Dunkel
Third Place
Eric Stockinger
Riverside, California
"Darkest Depths
of Mordor"



Illustrations by Marlin Hess

Ingredients for 10 gallons

- 1 1/2 pounds crystal malt
- 2 pounds Telfords light dry malt extract
- 1/4 pound CaraPils malt
- 1 pound flaked barley
- 7 pounds Munich malt
- 9 pounds Klages malt
- 1/2 ounce Centennial hops (120 minutes)
- 1/2 ounce Chinook hops (120 minutes)
- 2/3 ounce Northern Brewer hops (120 minutes)
- 1/2 ounce Centennial hops (30 minutes)
- 1/2 ounce Cascade hops (30 minutes)
- 1/2 ounce Tettnanger hops (30 minutes)
- 1/2 ounce Cascade hops (aroma)
- 1/2 ounce Hallertauer hops (aroma)
- Wyeast Munich liquid yeast

pH water adjusted to 6.5 with H₂SO₄
Krausened with fresh yeast

- 2/3 cup dextrose (corn)
- 2/3 cup maltose (rice)
- 2/3 cup dry malt extract

- Original specific gravity: 1.060
- Terminal specific gravity: 1.018
- Boiling time: 120 minutes
- Primary fermentation: 10 weeks at 39 degrees F (4 degrees C) in glass
- Age when judged (since bottling from keg): three months

Brewer's specifics

The pH was adjusted to 6.5 with H₂SO₄. Decoction mash. Dough-in mash to 118 degrees F (48 degrees C) for 20 minutes. First decoction to 140 degrees F (60 degrees C) for 60 minutes. Second decoction to 155 degrees F (68 degrees C) for 60 minutes. Third decoction to 170 degrees F (76.5 degrees C). Krausened with 2/3 cup dextrose, 2/3 cup maltose, 2/3 cup dry malt extract and fresh yeast. Bottled from keg.

Judges' comments

- "Well made. Too alcoholic for style. Good beer."
- "Alcoholic, malty. Too strong for style. Good beer."

CALIFORNIA COMMON BEER

Second Place
Curtis Palm
Palouse, Washington
"Number 4"

Ingredients for 5 gallons

- 7 pounds amber malt extract syrup
- 3 pounds two-row pale malt
- 1 pound toasted pale malt
- 1/2 pound dextrin malt
- 3/4 pound crystal malt
- 2 ounces Chinook hops (60 minutes)
- 1 ounce Cascade hops (60 minutes)
- 1 ounce Cascade hops (finish) Wyeast Danish
- Lager liquid yeast slurry from starter
- 3/4 cup fructose to prime





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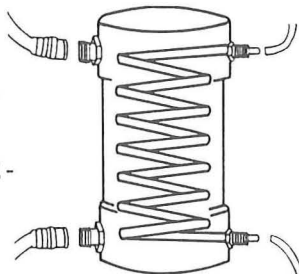
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- Original specific gravity: 1.044
- Terminal specific gravity: 1.011
- Boiling time: 60 minutes
- Primary fermentation: six days at 60 degrees F (15.5 degrees C) in plastic
- Secondary fermentation: 19 days at 60 degrees F (15.5 degrees C) in glass
- Age when judged (since bottling): 4 1/4 months

Brewer's specifics

Mashed all grains for 20 minutes at 120 degrees F (49 degrees C), then raised to 155 degrees F (68.5 degrees C) for 30 minutes.

Judges' comments

"Smooth, high quality. Slightly salty finish is a bit odd. Conditioning is excellent."

"Too much hop bitterness for style."

CLASSIC PILSENER

German Pilsener

Second Place

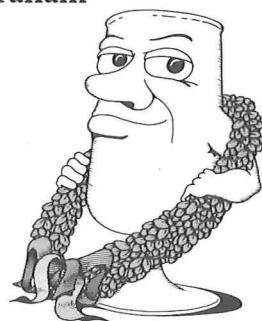
Wayne Greenway and Mark Graham

Oakland, California

"Deathbed Pils"

Ingredients for 13 gallons

- 20 pounds Klages malt
- 20 pounds Munich No. 10 malt
- 20 pounds Vienna malt
- 20 pounds CaraPils malt
- 3 ounces Saaz hops (60 minutes)
- 7 ounces Saaz hops (40 minutes)
- 6 ounces Saaz hops (finish)
- 1 ounce Saaz hops (dry-hopped for two weeks)
- Wyeast Danish Lager liquid yeast
- 1 cup corn sugar to prime



- Original specific gravity: 1.044
- Terminal specific gravity: 1.015
- Boiling time: 60 minutes
- Primary fermentation: 14 days at 50 degrees F (10 degrees C) in glass
- Secondary fermentation: 14 days at 40 degrees F (4.5 degrees C) in glass
- Age when judged (since bottling): 4 1/2 months

Brewer's specifics

Mashed all grains for one hour at 153 degrees F (67 degrees C), 1 ounce Saaz hops in primary for 14 days.

Judges' comments

"Very clean. Overall an excellent beer. True to style."

"Overall very drinkable. Just the right touch of hops. I liked it."

"Very nice smooth brew. Very delicate hop-malt aroma. Nice job!"

CREAM ALE

Third Place
Victor Gottlieb
Manakin-Sabot, Virginia
"Gottlieb's Victory Beer
No. 18A"



Ingredients for 5 gallons

- 5 3/4 pounds Brewers Gold malt extract
- 1/4 pound CaraPils malt (5 minutes)
- 1/4 pound crystal malt (5 minutes)
- 1/3 ounce Willamette hops (60 minutes)
- 1/3 ounce Hallertauer hops (60 minutes)
- 1/3 ounce Cascade hops (60 minutes)
- 1/2 ounce Hallertauer hops (2 minutes)
- 1/2 teaspoon Irish moss
- Wyeast Chico Ale liquid yeast
- 3/4 cup corn sugar to prime

- Original specific gravity: 1.044
- Terminal specific gravity: 1.010
- Boiling time: 60 minutes
- Primary fermentation: 14 days at 68 degrees F (20 degrees C) in glass
- Age when judged (since bottling): 2 1/2 months

Brewer's specifics

Toasted malt at 300 degrees F (149 degrees C) for 10 minutes. Steeped grains for five minutes until water boiled.

Judges' comments

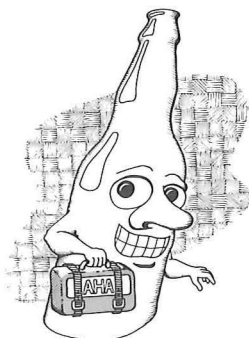
"A bit aggressive but OK. High temperatures or lag time could be the cause of problems."

"Sweet, phenolic and hoppy. Watch sanitation. Back off crystal malt and finishing hops."

"I get a slight oxidized-nutty aroma with air. Less crystal, try mashed CaraPils. Keep ferment temperature down and lighten up on hops."

DORTMUND/EXPORT

Second Place
Stu Tallman
Rochester, Massachusetts
"Stu Brew"



Ingredients for 10 gallons

- 17 pounds two-row pale malt
- 2 pounds Munich malt
- 1 pound CaraPils malt
- 6 ounces crystal malt
- 1 ounce Perle hops (60 minutes)
- 3 ounces Saaz hops (30 minutes)
- 2 ounces Saaz hops (12 minutes)

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- 1 ounce Tettnanger hops (12 minutes)
- 1/2 teaspoon gypsum
- Wyeast No. 2206 liquid yeast

- Original specific gravity: 1.054
- Terminal specific gravity: 1.018
- Boiling time: 60 minutes
- Primary fermentation: 14 days at 49 degrees F (9.5 degrees C) in metal
- Secondary fermentation: 28 days at 49 degrees F (9.5 degrees C) in metal
- Age when judged (since bottling): 3 1/2 months

Brewer's specifics

Mashed all grains at 120 degrees F (49 degrees C), raised to 153 degrees F (67 degrees C), then raised to 165 degrees F (74 degrees C). Sparged with 175 degrees F (79.5 degrees C) water. Carbonation used: forced CO₂.

Judges' comments

"Fairly pleasant to drink. A little harsh astringency. Some nice hop flavors here. Hop variety may be inappropriate. Pretty nice."

"Good beer. Cut back on bittering hops."

WHEAT BEER

Weizenbock
Second Place
Paddy Giffen
Cotati, California
"Pale Moon Rizen Weizen"

Ingredients for 5 gallons

- 3 1/2 pounds amber dry malt extract
- 6 pounds wheat malt
- 3 pounds Klages malt
- 1 1/2 pounds cry-60 malt
- 1 1/2 pound CaraPils malt
- 1/2 ounce Perle hops (60 minutes)
- 1 1/4 ounce Saaz hops (30 minutes)
- 3/4 ounce Hallertauer hops (dry-hopped)
- Wyeast No. 3056 liquid yeast
- 2/3 cup corn sugar to prime

- Original specific gravity: 1.074
- Terminal specific gravity: 1.025
- Boiling time: 60 minutes
- Primary fermentation: five days at 65 degrees F (18 degrees C) in glass
- Secondary fermentation: six weeks at 50 degrees F (10 degrees C) in glass
- Age when judged (since bottling): 7 1/2 months

Brewer's specifics

Mashed all grains. Protein rest one-half hour at 120 degrees F (49 degrees C). Raised to 152 degrees F (67 degrees C) for one-half hour, then raised to 157 degrees F (69.5 degrees C) for one-half hour.



Judges' comments

"Nice, warming weizenbock; the alcohol level is appropriate."

"Great beer! Very enjoyable but could use more wheat character. Try a real weizen yeast."

"This is a good-tasting, well-made, weizen beer."

1991 BEST OF FEST CLUB COMPETITION WINNER

Vienna
Mike Fertsch
Woburn, Massachusetts
Representing the
Boston Wort Processors
"Mt. McLaughlin
Märzen"



Ingredients for 3.25 gallons

- 3 pounds Munich malt
- 3 1/2 pounds Vienna malt
- 3/8 pound crystal malt
- 7/8 ounce Hallertauer hops (60 minutes)
- 1/8 ounce Hallertauer hops (finish)
- 1/2 teaspoon gypsum in mash
- 1/2 teaspoon gypsum in sparge
- 1 teaspoon Irish moss
- Bierkeller yeast from culture
- 2/5 cup corn sugar to prime

- Original specific gravity: 1.056
- Terminal specific gravity: 1.021
- Boiling time: 60 minutes
- Primary fermentation: seven days at 52 degrees F (11 degrees C) in glass
- Secondary fermentation: 20 days at 32 to 52 degrees F (0 to 11 degrees C) in glass
- Age when judged (since bottling): 14 1/2 months

Brewer's specifics

Mashed all grains at 130 degrees F (54.5 degrees C) for 30 minutes, raised to 152 degrees (67 degrees C) for 90 minutes, sparged with 174 degree F (79 degrees C) water.

Judges' comments

"Clear, good color, head OK. Malty, overconditioned. Body OK, back off on priming sugar."

"Smooth, sweet, not quite enough balancing. Slight astringency. Not bad—more hops would help this in flavor."

WORLD OF WORTS

CHARLIE PAPA ZIAN

Turtles Wheat Beer



ou don't have to be an all-grain brewer to make a terrific wheat beer. There are some great wheat malt extracts that would make most any fermenter happy to try a five-gallon batch.

As soon as one mentions "wheat beer" the discussion often leads to traditional Bavarian or Berliner styles. These beers are unique, but what makes them special is not any significant amount of so-called "wheat" character, but rather the unusual yeast or microbial fermentations that are known to contribute distinctive character. They are splendid beers for those who appreciate the style. But what about wheat malt?

I've found very little written about wheat malt and the flavor it contributes to beers fermented with more common ale and lager yeasts. Yet from my experience American-made wheat malt (grain) and the wheat malt extracts available in the United States and Canada offer a distinct and pleasing toasted maltiness to beer. Their character is almost reminiscent of the

type of malt toastiness one seeks with an Oktoberfest style, but with the distinction of fermenting to a more complete degree. In other words, wheat malts and wheat malt extracts of the light amber variety available today serve to lighten the body of beers, but

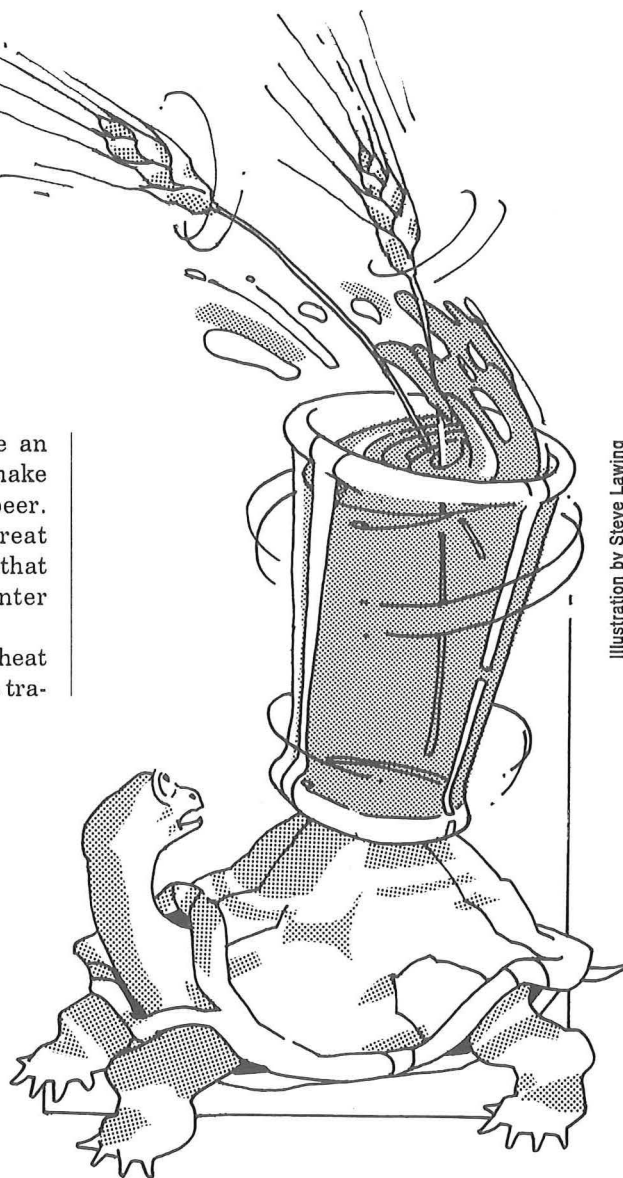


Illustration by Steve Lawing

contribute to a toasted malt character.

I've used wheat malt in Oktoberfests, bock beers, English-style brown ales and even low-alcohol beers (where I've wanted some malt flavor without the sweetness and body) with great success.

Turtles Wheat Beer is brewed straight from the can of malt extract syrup with only hops added. It couldn't be simpler. The brand I happened to use is 55 percent wheat malt and 45 percent barley malt. The main feature of Turtles Wheat is a non-sweet malt flavor. Its light body, amber color, light bitterness, refreshing hop aroma and satisfying quenchability make it a great warm-weather beer. It's an

American-style wheat beer.

The only drawback is a visual one. Chill haze is a problem you'll encounter often with homebrewed wheat beers. So you'll just have to shut your eyes, have a homebrew and swim with the turtles.

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"The bitterness of poor quality is remembered long after the sweetness of low price is forgotten"

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

Recipe for five gallons

- 6.6 pounds Munton and Fison wheat malt extract**
- 5 HBUs bittering hops (I used 1 ounce of Yakima Hallertauer)**
- 1/2 ounce flavor hops (I used Willamette hops at about 5 percent alpha acid)**
- 1/2 ounce Willamette hops for aroma**
- 1 ounce Cascade hops for aroma**
- 2 packages ale or lager yeast (or use a liquid culture)**
- 3/4 cup corn sugar for priming (1 1/4 cup dried malt may be substituted)**
- **Original gravity: 1.046 to 1.050**
- **Final Gravity: 1.008 to 1.012**

Add the malt extract to 2 gallons of water and the boiling hops and bring to a boil. After 30 minutes of boiling add the flavor hops. Continue to boil for an additional 30 minutes. Then turn the heat off, add aroma hops and steep for about two minutes.

Strain this hot concentrated hopped wort through a sanitized strainer and into the sanitized fermenter to which you have already added 2 gallons of cold water. When finished adding the concentrated wort add enough cold water to make 5 gallons. Pitch yeast when temperatures are below 75 degrees F (24 degrees C). Ferment at ale or lager temperatures.

Bottle with corn sugar or dry malt extract. Age for three weeks or until clear. Relax and have a homebrew. ☺

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.

DEAR PROFESSOR

OUR READERS

Damn the Instructions— Full Speed Ahead!

Dear Professor:

I have been making beer for about a year now. I just received my first copy of *zymurgy* and it didn't take very long to realize that I could improve on the recipe that comes with a can of malt.

I have quite a large supply of malt extract on hand, and I wonder if you could send me a better recipe than the sugar one that comes with the malt, while I continue to study your magazine and learn more about homebrewing.

Thank you,
Bill Tyson
Neaton, Texas

Dear Bill,

Well, it won't take you very long to discover that improving on the sugar recipes supplied with many malt extracts is a pretty easy thing to do. It doesn't take a whole lot of reformulation!

For starters, just substitute extract for sugar, pound for pound. That is the simplest thing you can do. If the extract you are using is hop flavored and the straight substitution turns out too bitter for you, then buy the plain unhopped version of that malt extract and substitute that.

Don't worry too much about over-bitter beer when you first try the recipe because, although you are adding more bitterness by substituting hopped extract for sugar, you are also adding more body and malt.

Sweetly,
The Professor, Hb.D

Hey, Copper...

Dear Professor:

I recently read in *Joy of Cooking* (no, not *Joy of Home Brewing*), that one should not cook in copper kettles (especially if kept in the closet!) because of toxicity problems. Does this mean I should not use my copper wort chiller? Will I get cancer? Or even worse, will my beer taste bad?

A penny for your thoughts,
Diastatic Dave
Issaquah, Washington

Buenas dias Taticdave,

Copper toxicity is most likely to occur when you use a scrubbed and shiny clean copper pot and cook a neutral substance in it. Scrubbed and shiny, a copper utensil will react with food. But if the surface is exposed to a mild acid, like wort or beer, the surface quickly becomes oxidized and offers some protection from the bare copper. Brewers have used copper for centuries and some still do. Their worts and brews are all acidic in nature. So relax.

Where's my penny?
The Professor, Hb.D.

A Beer for the Next Century?

Dear Professor:

I've read several letters to you asking advice on fermentation that gets stuck part way through, but I find myself with the inverse problem. I have a porter that just won't quit! The Porter from Hell was brewed more than 11 weeks ago, and is still foaming

away. It had a starting gravity of 1.046, has been living in 65 to 70 degrees F (18.5 to 21 degrees C) temperatures, and has Doric ale yeast doing the honors. My other Doric-driven brews have fermented in three to four weeks under similar conditions.

I'm relaxed and not worrying, but I am intrigued and curious about what is giving this batch its longevity. I would also like to be able to drink it before the turn of the century. Any ideas?

Patiently yours
Joan E. Fryxell
Crestline, California

Dear Joan,

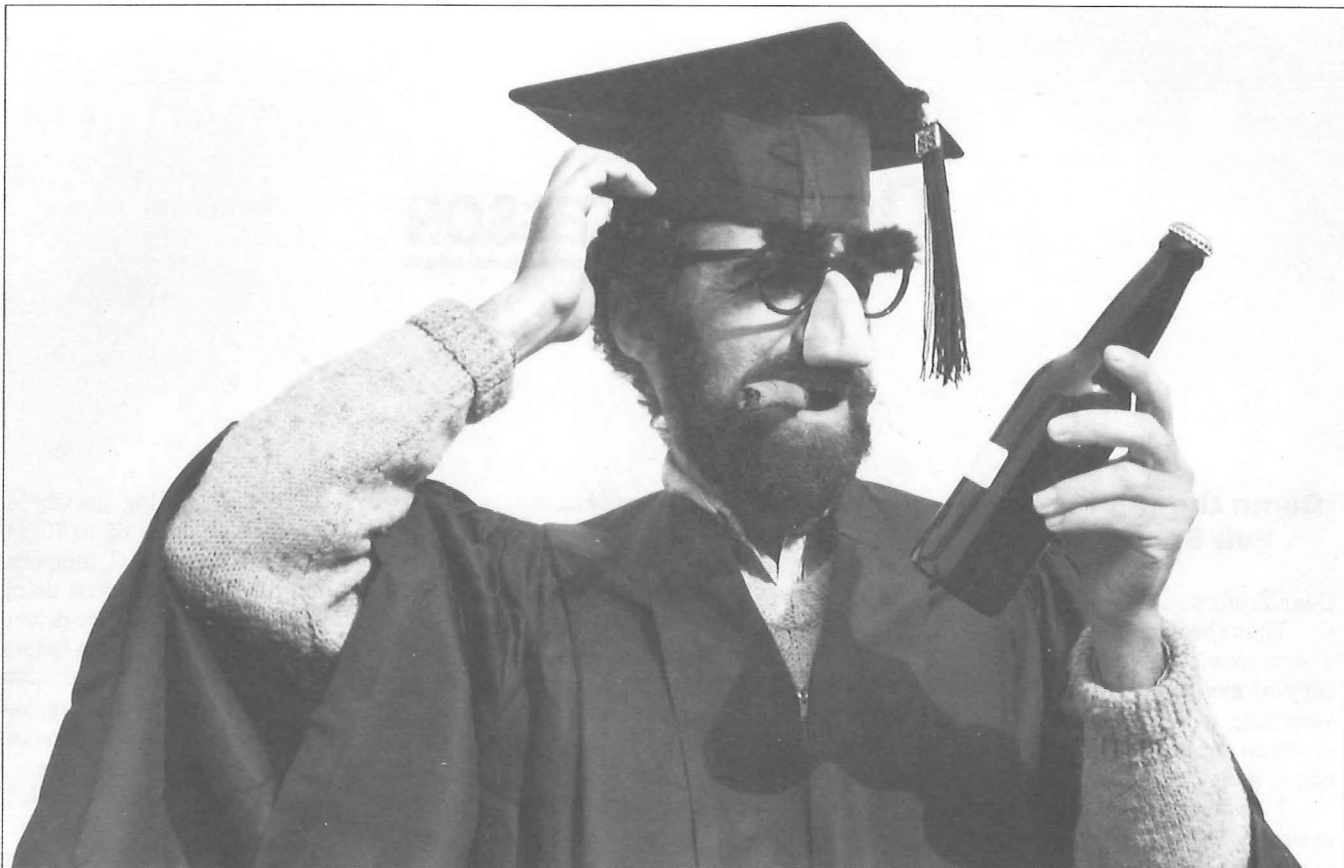
Most likely you've got one, two or three of three problems. You may have a wild yeast contamination that is fermenting things that are not normally fermentable (like dextrins), or the wort was not properly oxygenated or supplied with enough yeast nutrients at pitching time.

What to do next time? Change yeasts. Be sure to oxygenate the wort well. Don't use sugar in the recipe (if you did).

What to do now? Well, if the gravity reading doesn't change over two to three days despite visual activity, then bottle with a tad less (two-thirds cup rather than three-fourths cup) priming sugar and monitor the brew. Chances are the small amount of activity you saw in five gallons, divided among 60 12-ounce bottles, will be rather insignificant to carbonation.

If the beer gets too foamy after a month or two or three then make that your primary beer to drink and be done with it quickly.

Beerly bye gone,
The Professor, Hb.D.



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Lots of Good Questions

Dear Professor,

I've been a homebrewer for 13 years. Don't conclude that by now I'm a master brewer; I've just last year lost the habit of adding three pounds of dextrose per six-gallon batch of beer to get the gravity up. Only in the last six batches or so have I actually recorded what I added and what I did. You see, I'm an analytical chemist by profession and don't believe in recipes. I just do it (or try to), you know. Let me shoot several questions your way, please.

(1) Ever since my first homebrew I have refused to boil my wort and hops together for the requisite duration. Why? Because I can't relax knowing that a semiviscous, potentially sticky mass is just waiting to leap from my brewpot when I'm least attentive. Instead, I treat my water and boil my hops in five liters or so for the bittering/ flavor length then either steep my aroma hops or dry hop. In the brewpot I mash and add malt extract, specialty grains and anything else. Then I bring the wort up to a boil and just boil long enough with added Irish moss to get

the hot break and feel relaxed about sterilizing the wort. I then combine everything and don't worry. Am I really missing anything by going this route?

(2) Whenever I mash, I always throw in two teaspoons or so of amylase enzyme to try and absolutely ensure complete conversion. I never use non-malt adjuncts. Addition of amylase can only help, right?

(3) Fred Eckhardt says in *The Essentials of Beer Style* that beer just has got to be consumed as quickly as possible for it to be at its peak of flavor, aroma and bouquet. Now a lot of the "Winner's Circle" brews I see (that aren't long-maturation beers to boot) are six to 18 months old when judged. Who's zoomin' whom here?

(4) On page 45 of Dr. Foster's *Pale Ale*, he states that it doesn't make any difference if one uses cane or corn sugar as sugar adjuncts. Now I believed that sucrose, being a disaccharide, was unfermentable by yeast until they generated sucrase/invertase enzyme to cleave the oxygen linkage, thus breaking the molecule. This

enzyme hanging out in solution yielded the cidery, winy taste. Straighten us out, please.

(5) Just one more: At the risk of being nosy, what specifically happened to Dave Line so that he couldn't relax and have any more homebrews?

Have I asked too many questions?
Christopher Cape
Clark, New Jersey

Dear Christopher,

I do believe you are missing a boat.

(1) One of the primary purposes of boiling hops with malt is to provoke chemical reactions that improve the flavor, appearance, fermentation and overall quality of your beer. You may be happy with the quality but quite frankly I'd eliminate your elaborate combinations and isolated boils and combine it with an equal amount of attention so you don't boil over. Six of one is a half dozen of another.

(2) Wrong. Actually, the teaspoons of amylase are activated at temperatures not the same as mash temperatures. Also, if it were active, you would lose some control over the dextrin (for fuller body) and fermentable balance. However, if you don't mind your beers on the dry and thin side, amylase used at the proper temperatures can only produce more fermentables.

(3) That ole Fred, yessiree he can be a schmoozer all right but a nice one at that. It's true what he said, partly. If you buy commercially bottled beer, or any beer that has had the yeast filtered out, then the beer is best just before it leaves the warehouse doors of the brewery. Drink it at the freshest date you can find it. Now homebrews are quite different. They have yeast in the bottle. Yeast can protect the shelf life of any beer. As a matter of fact, some major Japanese breweries, I hear, actually dose their light lagers with a minute quantity of yeast just before bottling to help maintain the quality. And keep in mind those 18-month beers are usually the strong, full-bodied or hoppy brews that are complex and mature in wonderful ways...up to a point. You be the judge.

(4) I think you are straightened out. There are many opinions about cane sugar versus corn sugar. I think you've got it right—partly. It's not the enzyme hanging out in solution, it is the byproducts of the extra metabo-

lism required to hocus-pocus the sugar into being fermentable by the yeasts. I believe there is a difference. Others don't. Let's have a glass of homebrew someday and have a friendly argument and then get on with how we can make the world a safer place with homebrew.

(5) On a sad note, Dave Line died of Hodgkins disease in the prime of his life. He was one of the pioneers in the world of British homebrewing. It would have been a real treat to have met the man. We all owe him a toast toward the stars.

If you didn't ask questions, I
wouldn't have a job,
The Professor, Hb.D.

Mailable Beer and Other Stories

Dear Professor,

I'd like to share an experience with you and your readers, then ask a few questions.

Wolftrap has a wonderful tradition where much of the audience sits on the lawn and has a picnic lunch prior to the performance. Many "lawnies" either have wine or beer with their meal. I, of course, take homebrew. The homebrews I've been taking of late have a head such that you pour two to three ounces into a 12-ounce glass, then wait several minutes for the head to subside enough for drinking. Once I've finished that, I pour another two to three ounces and repeat the process. This technique has proved to be the fastest way of polishing off a 12-ounce brew (taking about 15 to 20 minutes) without getting foam all over my mustache and up my nose. Once, during intermission, a nearby lawnie asked what in the world I was drinking. When I responded "homebrew," his companion told me that he'd been salivating the whole 20 minutes. Well, I'd have shared, but, sorry, it was gone by that time.

So anyway, I have a few questions. Could you share a bit more of that infinite knowledge of yours?

(1) I recently mailed some samples of beer and mead to a friend. They never got there. As it turns out, the Mailing Requirements Office got it (because of damage), inspected it and decided that the contents contained "beer containing 0.5 percent

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or more alcohol content by weight as defined in Chapter 51 of the Internal Revenue Code." Well, I knew it had to be over 0.5 percent, but I didn't know that anything over 0.5 percent (by weight) was "NONMAILABLE" (their caps). It turns out that neither UPS nor any of the other carriers I've called will take it either. So how does one ship homemade beer, mead, etc.?

(2) I've read in *Making Mead* that there's a yeast associated with the brood chamber of a beehive. I believe it's called zygocaccharomyces (I've loaned out the book, so I can't check the spelling). This is the traditional mead yeast. Vierka sells a liquid yeast culture called mead yeast. Are they the same yeast? If not, is there some way I could get some commercially? If not, I have a friend who's a local beekeeper. He says that the bees have their brood chambers separated into several sections: one for the bee larvae, one for the pollen, etc. He's interested in trying to get a culture from a hive if there's no other way. Can you recommend a procedure for extracting some zygoc-whatever?

When you see them, please tell those folks at *zymurgy* "Thanks" for all the good info and help in one of the most far-reaching hobbies I know.

Doing my best to not worry and relax,

M.K. (Mike) Morrison
Pasadena, Maryland

Dear M.K.,

Well, actually, beer is mailable with carriers if it is for analytical purposes, or if it is intrastate. I know New York and California, for example, have been able to mail order wine and mead, but there are some minor regulations. Doing it interstate is technically not allowed if not for analytical purposes. How are you going to ship your brews to a friend? I don't know how you'll do it and frankly I don't need to be told as long as your friend eventually has the pleasure of enjoying your beer. Shhhh.

I believe it is zymocaccharomyces. Anyway, I know of no culture. Let me know how it goes with your bee-keeping friend. I'll trade you a bottle of my mead if you get me a culture.

Consider the message delivered,
The Professor, Hb.D.

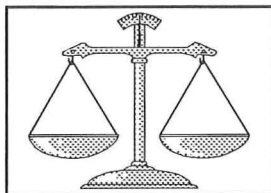
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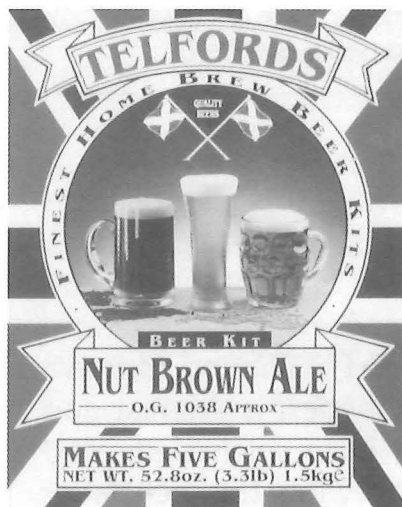
THE BEST FROM KITS

KURT DENKE

Last issue I wrote about the relationship between frostbite, Sir Francis Bacon, frozen food, the scientific method and beer kits. I will continue on a related theme, picking up with something I neglected to mention: Sir Francis Bacon's title, Lord Verulam, was derived from "Verulamium," the Roman name for the city of St. Albans, Hertfordshire. St. Albans now is the home of the Campaign for Real Ale, which only proves that all things are related to beer and beer is related to all things.

I spent an afternoon in St. Albans once with some CAMRA people, and after a couple glasses of Fuller's, I took a stroll through the ruins of Verulamium and contemplated the great age of this lovely town and its many pubs. Britain is full of Roman ruins, and Roman ruins always seem to remind me of beer. In the north, for example, is Hadrian's Wall, a massive Roman defensework. At Hadrian's Wall is a fort named Housesteads where there is a ruin of a Roman building that was converted by its post-Roman occupants to a malting kiln—Housesteads homebrew, one might call it. I suspect that beer flowed at the fort even when the Romans were there, because Britain isn't exactly wine country and beer is the ideal beverage for cool, misty weather.

Hadrian's Wall is impressive. It runs for approximately 50 miles across some pretty rugged terrain and at Housesteads it runs along a high rock ledge looking north to where the Picts and Scots lived. The Romans, whose conquest of the world sometimes seems limited only by their knowledge of it, were intimidated enough by these northern people to spend plenty of time and money to build a wall to keep them out. The Picts weren't a bad bunch, really. However, the Romans resented the Pictish



national pastime, which consisted of getting naked, painting oneself blue and slaughtering Romans. As the centurions learned, that can really spoil a toga party.

Perhaps if the Romans had been a bit more civil in their method of civilizing the known world, they would have gotten along with the Picts just fine. A centurion could have walked into a Pictish pub, ordered a pint and made small talk with the naked blue fellows. Because the Romans enjoyed slaughtering just as much as the Picts did, they'd have plenty in common to talk about—think of it as a sort of ancient sports bar. The Romans could teach the Picts how to sponsor gladiator contests and the Picts could teach the Romans to sing "Am I Blue."

That brings us around to the subject of what one would drink in a Pictish pub: Scottish beer. I would have reviewed a Pictish beer, but the Picts haven't been around for some time.

Telfords Nut Brown Ale

This kit, from Brewing Products Ltd. of Scotland, comes in a 1.5 kilogram (3.3 pound) can with instructions

to make 5 gallons using 1 kilogram (2.2 pounds) of sugar. I shredded the instructions and did like so:

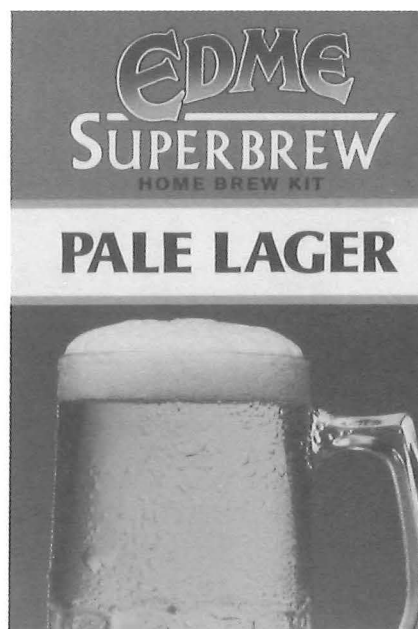
Ingredients for 3 gallons:

- 1 can (3.3 pounds) Telfords Nut Brown Ale kit
- 1/2 cup light dried malt extract (for priming)
- ale yeast
- 1 drop hop oil per bottle

- OG: 1.040
- FG: 1.012

I boiled the kit with 2 1/2 gallons of water for 30 minutes, then cooled the wort and pitched the yeast. After seven days, I primed it with the dried malt and added one drop of hop oil per bottle, then let it condition.

The finished beer has a deep chocolate-brown color and a pronounced grainy-roasty aroma. The body is full, the bitterness is moderate and the beer is, all in all, a very pleasant brown ale. Now, where did I put that blue paint?



Edme Pale Lager

We have a brown ale from Scotland to represent the people living to the north of Hadrian's Wall so I thought I'd also review something representative of the south side. However, the Romans weren't big fans of beer. Perhaps their failure to understand beer, which Julius Caesar referred to as a sort of inferior wine, comes in part from the terrible word for beer in Latin: *cerevisia*. Not only

is this ugly word pronounced, according to modern students of Latin phonetics, as "kara-wissy-a," but if my Latin's not too rusty the word's derivation is "Whizz of Ceres (the goddess of agriculture)." Yech.

In any event, since most southern Europeans favor light lager beers, I thought we'd take a look at an old standby, the Edme Pale Lager kit. Instead of making 5 gallons with tons of sugar, I scaled it down to 3 gallons of all-malt beer.

Ingredients for 3 gallons:

- 1 can (3.25 pounds) Edme Pale Lager kit
- ale yeast
- 1/2 cup light dried malt extract (for priming)
- 1 drop hop oil per bottle

• OG: 1.038

• FG: 1.007

I boiled the extract with a gallon of water for 20 minutes, then topped up to 3 gallons, cooled the wort and pitched the yeast. The beer fermented for about a week, then I bottled it with dry malt extract and hop oil.

The finished beer is rather dry and spicy with a medium gold color and light body. This would be a great beer to drink while sitting in Rome through the summer contemplating world conquest.

Irish Chocolate Malted Milkstoutshake


When I was just a tyke I discovered I loved malted milkshakes, obviously an indicator of tastes yet to develop. Recently I was toiling over the ol' blender when a can of Telford's Stout kit caught my eye. Yeah, I know—I'm sick.

Ingredients for 1 milkshake:

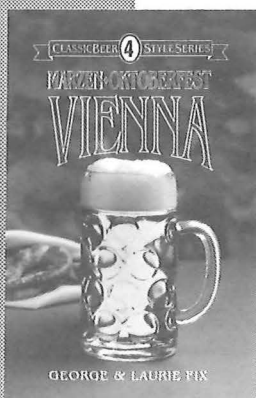
- 5 ounces milk
- 2 ounces chocolate syrup
- 1 ounce stout kit
- 2 cups vanilla ice cream

Toss it all into a blender and whirl away. No yeast, no wait, no bottling. It can be somewhat helpful to dissolve the malt extract in the milk, because it can get viscous when cold.

I thought the bitter finish would go nicely with the chocolate flavor and it did, but in order to like this sort of thing you've got to enjoy bitterness. If you like your malteds on the extra-malty side, you might want to add an ounce or two of plain malt extract.

This beverage has a couple of advantages over beer. First, it's ready in about 10 minutes instead of a few weeks and second, you can drink 37 of them without getting silly. 

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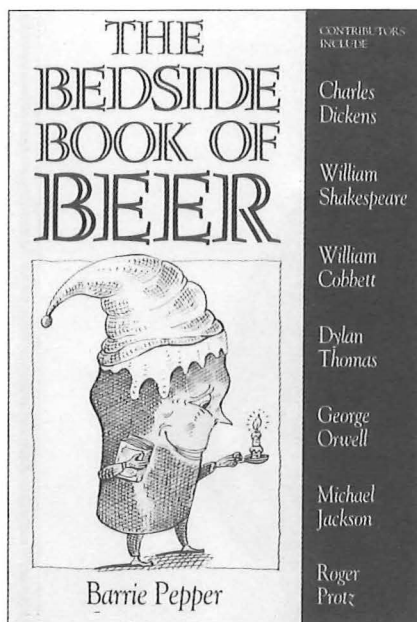


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REVIEWS

KIHM WINSHIP



The Bedside Book of Beer

I can find only one fault with this "bedside" volume: it makes one far too thirsty for late reading. In a large comfy chair earlier in the evening, however, it has no peer.

The editor has gathered 230 pages of poetry, song, fiction and fine writing about ale, beer, brewing, pubs and drinking. Some entries are a single verse and others entire chapters. They are culled not just from books about beer, but from novels, short stories, diaries and newspapers. Many are gathered in an anthology for the first time.

The list of more than 100 authors includes Charles Dickens, Shakespeare, Dylan Thomas, George Orwell, P.G. Wodehouse, St. Luke and a host of other worthies.

But many of the gems come from less famous contributors. An anonymous 1872 walk through every corner of Burton's Bass brewery is detailed

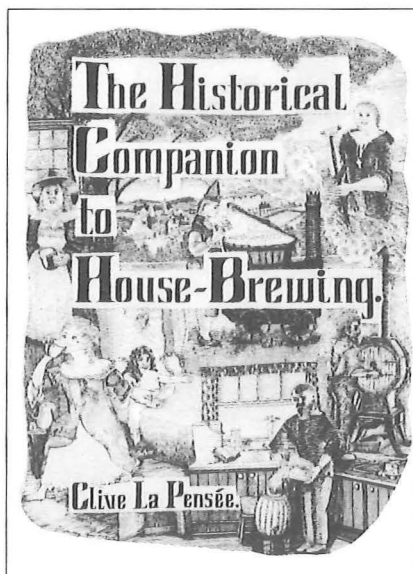
and picturesque, engrossing and delightful. Actor John Barrymore's yachting log yields a description of "The Bar of the Hotel Belman, Mazatlán, Mexico" with the single most beautiful description of a beer that I have ever read.

There are smiles aplenty, many from the limericks, toasts and drinking songs and more from the memoirs of literary drinkers. Let Brendan Behan take you on a boyhood walk with his grandmother to the Blue Lion, and share her "bit of embarrassment" when the ladies of the night greet her by name.

Then take a ride to a coaching inn or another venerable brewery. Beyond the tremendous enjoyment gathered here, the editor has saved a great deal of valuable history from the dustbin of time.

If you only own two books about the history and culture of beer, one of them Michael Jackson's *World Guide to Beer*, this should be the other.

The Bedside Book of Beer, edited by Barrie Pepper (Alma Books, 1990; £6.99 in paperback).



The Historical Companion to House-Brewing

Imagine a conversation over homebrew with triplets, one a scientist, one a historian and the third a very opinionated wit, all finishing one another's sentences.

Now put those three inside one author and one book and you will have a good grasp of the tone of Clive La Pensée's *The Historical Companion to House-Brewing*, which reads like a historical manifesto with recipes.

From the first page, La Pensée is intent on telling you about the centuries-long suppression of homebrewing and the legion of unique brews crushed under the heels of factory beer. And if you are the kind of homebrewer who is prepared to do his or her own malting, he will show you how to brew in the chapters that follow.

Companion includes detailed discussions of home malting, mashing and water treatments followed by an extensive collection of recipes from the 15th to 19th centuries. Especially fascinating are recipes for the unhopped brews that preceded the ales and beers we know today, complete with a catalog of the herbs used to spice and enhance them.

Did you know, for instance, that bog myrtle was reputed to cause rapid drunkenness, but also was laid among the linens to keep away the fleas? And that is just one herb among more than 30 in Chapter 10.

If you are an advanced homebrewer with a head for technical, historical and political prose (often coming at you in the same paragraph), you will enjoy the company of this new companion. Others, beware.

The Historical Companion to House-Brewing by Clive La Pensée (Montag Publications, 1990; £6.50 in paperback).

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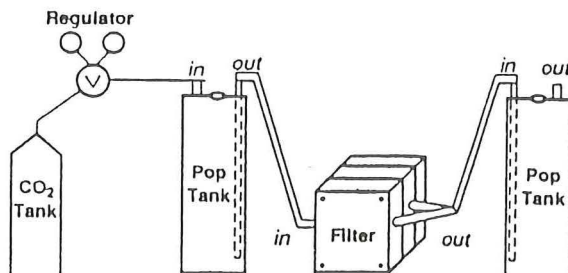
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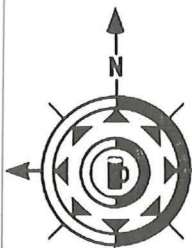
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HOMEBREW CLUBS

JAMES SPENCE

The following highlighted homebrew clubs are from clubs located in Division 1, which includes Maine, New Hampshire, Vermont, Massachusetts, Connecticut, New York, Pennsylvania, Ohio and New Zealand. For contact information, see the individual club listings in "new clubs" and "Veteran Clubs."

Beer Brewers of Central Connecticut, Middletown, Conn.

Membership to the BBCC includes a subscription to the newsletter "Beer Dreams." Club T-shirts are now available featuring BBCC logo designed by Andy Zygmunt. T-shirts are \$8 for BBCC members, \$10 for non-members. Monthly meetings include judging sessions using the AHA 50-point scale. They concentrate on one or two styles of the month but homebrews of any style are always welcome.

Worthog Home Brewing Club, Dresden, Maine

The Worthogs have been meeting monthly since January 1991. They are a collection of homebrewers who escape to sample each other's homebrews, socialize and brew a batch if so moved. They welcome all sufficiently relaxed homebrewers. Claude Langlois demonstrated partial mashing at the August meeting, brewing a brown ale and providing members with tips to increase the sophistication of their brewing and improve the flavor of their beers. Beware of the water-filled carboy. One member had an interesting experience when a carboy filled with water and B-brite was left on a porch to soak. The sun shone on the carboy, creating a gigantic magnifying glass that ignited the cardboard upon which it rested. Fortunately, someone was home or they may have had one less place to meet.

Maine Homebrew Society, Portland, Maine

Many club members submitted entries to the 1992 Northeast Regional Homebrew Competition. The best-of-show judging was very informative, especially to those who sat for the beer judging exam. The club is entering its second year. Ideas being discussed include sponsorship of a competition during the summer in Portland. Brews are in preparation for the coming National Conference in Milwaukee. They expect to have many more entries this year due to club growth.

Maine Ale and Lager Tasters (MALT), Topsham, Maine

MALT membership is more than 50 now, showing that there is a growing interest in homebrewing in this part of the state. The 1991 Common Ground Fair Homebrew Competition had a 54 percent increase to a total of 218 entries. For 1992 MALT is gearing up for even more entries by getting people involved in the BJCP. Sometime in March the exam will be given in Maine and many MALT members are preparing to take it. Good luck to all of you. During the summer MALT will be having a pig roast and jam session that was put off from last fall. Another pool party at Gary Mills' is in the works. The Common Ground Fair will be on Sept. 26. It's not too early to start a favorite beer. If you are a homebrewer and live in Maine, join MALT. The state motto is "Maine, The Way Life Should Be." At MALT the motto is — "MALT, The Way Beer Should Be."

New Hampshire Biernuts, Keene, N.H.

The Biernuts are looking for new members who appreciate fine beer and want to learn more about homebrewing. Being located in central New England allows Biernutters to visit many great brewpubs and breweries. Upcoming events: Vermont Brewery Tour (March), Bockfest (April), Michael Jackson video (May). They are as committed to having fun as to educating themselves about brewing techniques and beer styles. Current membership runs the gamut from beginning extract brewers to all-grain and brewpub brewers. The Biernuts September 1992 Oktoberfest will have a live band, beer tent and authentic German food. Prossit!

North Jersey Worthogs, Garfield, N.J.

Because brewing is a religious experience for members of the North Jersey Worthogs, meetings are held Sundays. A hard core of Worthogs formed the club early last summer and

NEW CLUBS

ALASKA

Greater Alaska Suds Swillers,
c/o Roger P. Penrod, 1737
University Ave. G-32, Fairbanks,
AK 99709, (907) 474-9163.

Rainbrewers, c/o Russ Staska,
171 Raspberry Lane N., Ketchikan,
AK 99901, (907) 247-0767.

ARIZONA

Arizona Brewers and Vintners Association, c/o Bruce E. Dahlgren, 3713 West Gelding Dr.,
Phoenix, AZ 85023, (602) 843-4004.

CALIFORNIA

Old Capitol Brewing Club, c/o Christopher Howley, 418 Mills Dr.,
Benicia, CA 94510, (707) 644-5519.

COLORADO

The Brewsklers, c/o Graham Ullrich, PO Box 2045, Crested Butte, CO 81224-2045, (303) 349-5969.

Mash Tongues, c/o Steve Dempsey, 1325 Birch #14, Fort Collins, CO 80521, (303) 491-0630.

FLORIDA

Broward Beer Nuts, c/o Home Brew Inc., 6037 Miramar Pkwy.,
Miramar, FL 33023, (305) 962-0100.

Palm Beach Draftsmen, c/o Homebrewers Outlet, PO Box 30626, Palm Beach Gardens, FL 33420-0626, (407) 626-2899.

The Northeast Florida Society of Brewers (SOB's), c/o Bob Davis, 7 Park Terrace Drive, St. Augustine, FL 32084, (904) 824-5252.

Tampa Bay BEERS (Beer Enthusiasts Enjoying Real Suds), c/o Tom Lyons, Winter Haven, FL, (813) 665-0966.

GEORGIA

2 Dudes That Brew, c/o Peter Coleman, 6998-D Kilay Court, Ft. Stewart, GA 31314, (912) 876-0556.

IDAHO

Homebrewers of the Palouse, c/o Kane Francetich, PO Box 516, Troy, ID 83871, (208) 835-5263.

ILLINOIS

Wizards of Wort, c/o Steve Schmit, 1109 Stanton Rd., Lake Zurich, IL 60047, (708) 438-0233.

INDIANA

Wells County Homebrewers Club (WELCOME), c/o Bruce L. Schocke, 10190 N. 300 West, Markle, IN 46770, (219) 638-4570.

since homebrewing was officially (finally) legalized in the state last August, many more brewers have come out of the woodwork. The New Jersey Worthogs encourage beginners to become involved in the empowering act of brewing and for all North Jersey brewers to taste brews, discuss techniques, arrange tours, enter competitions and generally raise beer consciousness at monthly meetings.

Sultans of Swig, Cheektowaga, N.Y.

Informal meetings are held monthly with occasional special events such as pub crawls, brewery tours, formal tastings and brewing "lessons." Fun and informative, all events are attended by brewers and non-brewers alike.

Ithaca Brewer's Union, Ithaca, N.Y.

Late in 1991, the IBU topped the 75-member mark. They held their first elections for Primary Fermenter, Secondary Fermenter and Minister of Finance at the December 1991 meeting (the deadline for Club News precludes an announcement of new officers here). Their hope is that a more formal organization will help the IBU to better serve their diverse brewing interests. On March 14, 1992, thanks in large part to the efforts of Competition Director Dwight Beebe, they will be holding their first AHA Sanctioned competition, the IBU St. Patrick's Day Porter and Stout Competition. This will be an open competition with categories for brown porter, robust porter, dry stout, sweet stout and imperial stout.

Long Island Brewers, Mastic, N.Y.

Richard Traube hosted the second annual picnic in September. Homebrewers were serenaded by Traube's record collection and his neighbor's chain saw. Meetings have grown to occupy two or more booths at Fadeley's. Now club members can choose between tables, homebrews and conversations.

Upstate New York Homebrewers Association, Rochester, N.Y.

A club bus trip to tour the micros and brewpubs of the Toronto area is set for March 21 and 22. Spaces are available, call for information. The annual contest, the Third Empire State Open, will be April 25. There are hundreds of dollars of prizes for the winners and the entry fee is low. The BJCP exam will be given. The contest ends with a public judging and a social function including homebrew samples. Write or call for a flyer.

Bloatarian Brewing League, Cincinnati, Ohio

Regular club meetings will be March 20, May 15, July 19, Sept. 18, and Nov. 20. April 17-18 will be club group brewing sessions. The club plans a trip to the AHA Conference in Milwaukee June 10-13. The Bloatarians will host the 4th Annual Beer and Sweat Regional Club All Day/All Night Party on Aug. 15. Last year eight regional clubs shared 18 kegs of primo barley sandwiches, lots of beer and real sweat (or was that lots of sweat and real beer?) The 2nd Annual Brewing with Skunks and Mother Nature Campout/Brew Session will be Oct. 2-3. Last year the lack of running water did not deter the Five Brewers from Hell from brewing 15 gallons of OG 1.98 that did fool Mother Nature.

Society of Northeast Ohio Brewers (SNOBS), Euclid, Ohio

The homebrew SNOBS have just celebrated their first anniversary and membership has grown to more than 80. They have developed an excellent brewing library with club funds and monthly raffles of beer supplies and related donations. They have speakers and "style of the month" contests for members to have their brews judged. Their first year included a bus trip to the Oldenberg Brewery in August for the Beer and Sweat gathering with other regional clubs and an Oktoberfest with lots of good food, overnight camping and an awards presentation. Additional events for the coming year include trips to cities like Toronto and Chicago. Other clubs and brewers are welcome to join the excursions.

Harrisburg Area Homebrewers Association, Lemoyne, Pa.

HAHA celebrated its first anniversary in January with a special 65th birthday fete for club member and award-winning brewer Don Leaman of Lebanon, Pa. Some 50 members strong, the HAHA meets the last Saturday of each month at Scotzin Bros., a beer and winemaking supply store in Lemoyne. Beginning brewers are always welcome.

Three Rivers Alliance of Serious Homebrewers (TRASH), Pittsburgh, Pa.

1991 was a busy year for TRASH. Their first Sanctioned Competition (Bock and Mead), attendance at the AHA National Convention (with six kegs of beer and TRASH Toronto at the

LOUISIANA

Dead Yeast Society, c/o Jim Boudreaux, 415 Woodvale Ave. Apt. 201C, Lafayette, LA 70503-3457, (318) 981-4072/266-6886.

MAINE

Worthog Home Brewing Club, c/o Greg Blanchette, Box 4255, Dresden, ME 04342, (207) 737-8174.

Malt of the Earth Society, c/o Ernest Gurney, PO Box 117, Farmington Falls, ME 04940, (207) 778-6738.

MARYLAND

Bay Country Brewers, c/o Reid Woolford, 4408 Parkwood Ave., Baltimore, MD 21206, (301) 396-9254.

MASSACHUSETTS

IBIS, c/o Wade Krull, 32A Cherry Hill Dr., Danvers, MA 01923.

MICHIGAN

Keweenaw Real Ale Enthusiasts United for Study and Education in Naturally-Effervescent Refreshment Science (KRAEUSENERS), c/o Daniel Butler-Ehle, Route 1, Box 27, Calumet, MI 49913, (906) 337-3525.

Great Lakes Brewers, Michigan Chapter No. 1, c/o Joe Gedmen, 34632 Hivley, Westland, MI 48185, (313) 721-6288.

MONTANA

MT Bocks Society, c/o David Todd, 4356 Trailmaster, Billings, MT 59101, (406) 256-8913.

NEW HAMPSHIRE

New Hampshire Blernuts, c/o David Weisberg, 34 Hardy Court, Keene, NH 03431, (603) 357-7962.

NEW JERSEY

The Bell Hops, c/o Dave Ballard, 50 Winans Ave., Piscataway, NJ 08854, (908) 752-7347.

NEW YORK

Adirondack Homebrewers, c/o David A. Vana, 276 Averyville Rd., Lake Placid, NY 12946, (518) 523-1899.

Paumanok United Brewers (PUB), c/o Ben Jankowski, PO Box 14, Sea Cliff, NY 11579-0014, (516) 922-1566.

OREGON

Helles Canyon Quaffers, c/o Ken Hohmann, 69796 Jim Town Rd., Wallowa, OR 97885, (503) 886-3501.

SOUTH CAROLINA

Palmetto State Brewers, c/o Marty Mantz, 1139 Green Valley Lane, Columbia, SC 29210, (803) 798-4148.

TEXAS

Borderline Brewers, c/o Mike Seidensticker, 615 Baltimore Dr., El Paso, TX 79902-2517, (915) 544-5741.

first International TRASH Club table), their 5th Annual Picnic, first TRASH Outing (Cleveland area brewpubs via van) and numerous ribbons won by members at national competitions made this the best year yet. Congratulations to Kathy Benson, Shirley Martin and Greg Walz for winning ribbons for their beers and mead; Bob Joseph for becoming TRASH's fifth BJCP Judge; Ralph Colaizzi and Greg Walz for advancing to BJCP Certified level. Special thanks to Tim Henegin for organizing the Annual Picnic; Shirley Martin, Ralph Colaizzi, Mark Benson, Tony Knipling and others for their efforts that made the competition such a success! The 2nd Annual AHA Sanctioned TRASH Competition All Categories will be April 11, and is open to anyone anywhere. Call for details.

BLOVIATES, Saundertown, R.I.

The BLOVIATES have been busy the past months with numerous meetings and demonstrations. These have included a yeast test by Kerry Brown and Tony Fischl (standard wort put into separate fermenters each with a different yeast) to show the character imparted by yeast alone, a 15-gallon mashing system by Jim Kennedy and a beer off-flavor perception test by Jim Sullivan and Brian McCully. Coming events will include a mashing demonstration, counterpressure bottle filling, yeast culturing and a Boston Brewery tour. The club also would like to get all members into the BJCP. If these activities (and homebrew) tickle your liver, then call because they love to see new members!

Green Mountain Mashers, Burlington, Vt.

At least 10 mashers made the trip down to Manchester in June for Club Night. In that same month, the yearly club competition drew 20 entries. Dave Gilcrest won best of show with a honey-ginger stout. Also in June, six Mashers learned that they had become Recognized Beer Judges, having passed the test taken in April. In September, the Mashers helped Professor Leonard Perry bring in the hop harvest at the University of Vermont Hop Cultivar Trials. In December they will visit Montreal and the local breweries and brewpubs. Dues are \$15 per year, \$10 for a newsletter subscription. Meetings are the first Monday every month, September to June.

Green Mountain Mashers, Hinesburg, Vt.

Now in their third year, the Green Mountain Mashers have become a solid and diversified group. Membership of 45 ranges from the all-extract to all-grain brewer, bottlers to keggers. Their goal is to remain accessible to brewers on all levels. Club meetings focus on specific beer styles and various brewing techniques. Occasional guest speakers enlighten them with expertise. Each year they board the "Trub Princess" and tour area pubs and breweries, this year to Montreal. Recently six members took the BJCP test and all passed. They hope to soon sponsor an AHA Sanctioned Competition.

Auckland Guild of Winemakers and Brewers, Auckland, New Zealand

Early in 1992 they had a palate training session to be followed by courses that should see some members become accredited wine and beer judges. At the Nationals in October 1991, the club received 27 awards including three golds and four best in class.

Far North Region Amateur Brewers and Vintners Club, Mangonui, New Zealand

A new committee was elected at A.G.M. June 1991 with thanks to the retiring committee for untiring efforts. Members enjoyed a good night at a Waipapa-kauri Lodge dinner at 90 Mile Beach on Oct. 11. The club hired a bus to pick up and return members to their homes. A number of them were able to sample the beers and wines to their hearts' content and more than one suffered a slight hangover the next day! Their next social event was the Christmas barbeque on the beach at Whatawhiwhi. To those in the northern hemisphere, December is the start of summer when the partaking of homebrew is even more appreciated. The club now has its own post office box number that saves changing the address each time a new secretary is elected.

Hibiscus Amateur Winemakers and Brewers Guild, Orewa, New Zealand

The Hibiscus Club held several social evenings as extra entertainment and used the profits to subsidize members who wished to go to the New Zealand Federation of Amateur Winemakers and Brewers National Competitions. The competitions were held Oct. 25 to 27. There were several excellent demonstrations on making wine and beer during 1991 and members showed their knowledge by succeeding in several competitions. Fred Vickers, club champion, won the Best Beer Trophy at the annual Whangarei Expo. There were 32 classes of wine and beer to enter into the 1991 National Competitions at Kawarau.

WASHINGTON

Mt. Baker Brewers, c/o Gary Southstone, 3277 North Shore Rd., Bellingham, WA 98226-9406, (206) 676-GARY.

South Sound Suds Society—Home of the Goopy Bocks, c/o Randy Rancier, 3301 College St. S.E. #H-7, Olympia, WA, (206) 438-0168.

Boeing Employees Wine and Beermakers, c/o Craig Paterson, 18513 S.E. 215, Renton, WA 98058, (206) 432-0526.

Mid-Columbia Zymurgy Association, c/o Michael J. Hall, 1120 McPherson Ave., Richland, WA 99352, (509) 946-5735.

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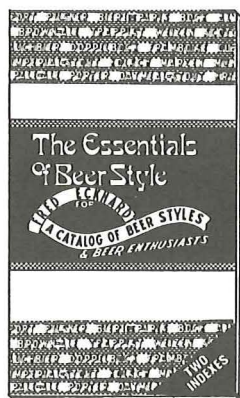
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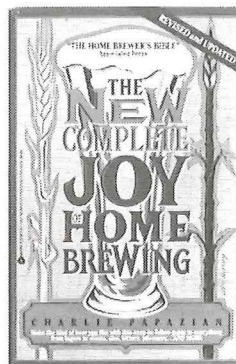
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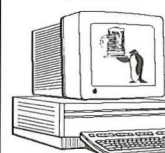
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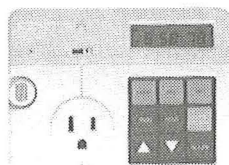
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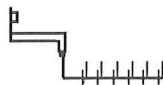
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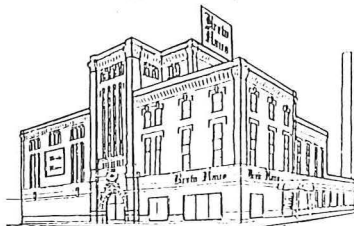


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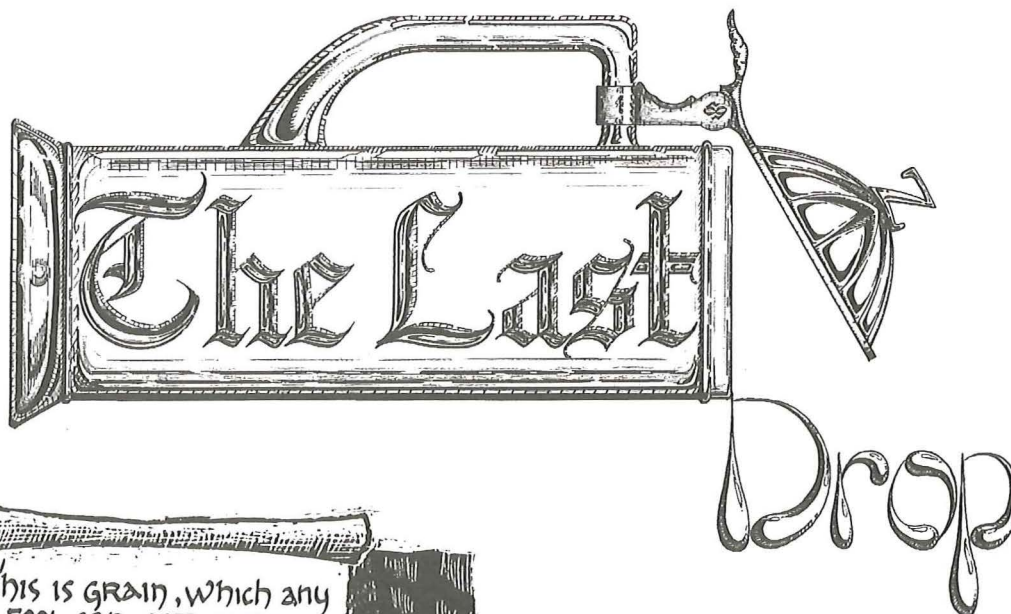
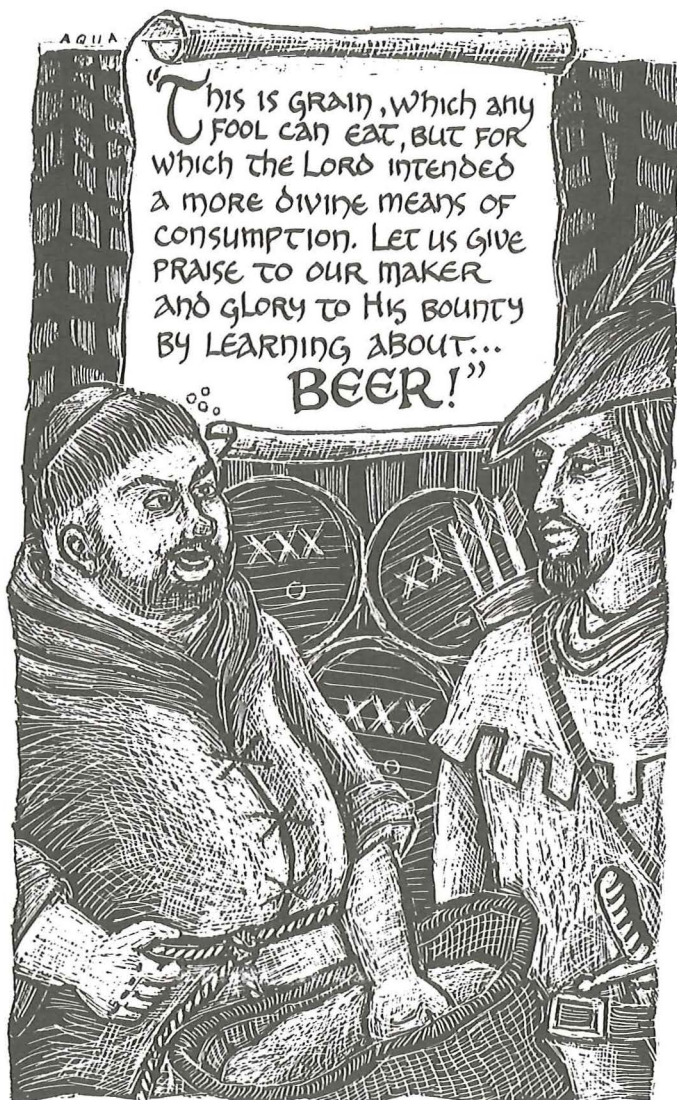


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*A dialogue from the recent remake of "Robin Hood"
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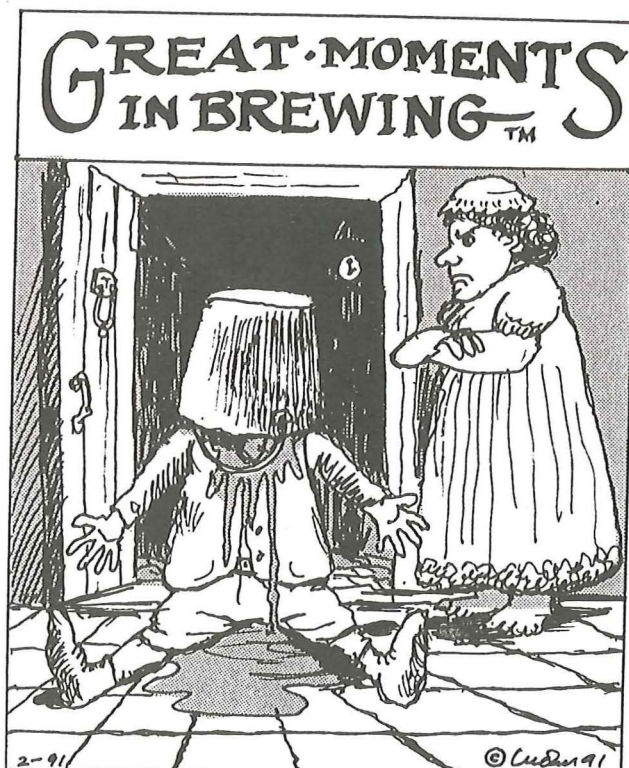


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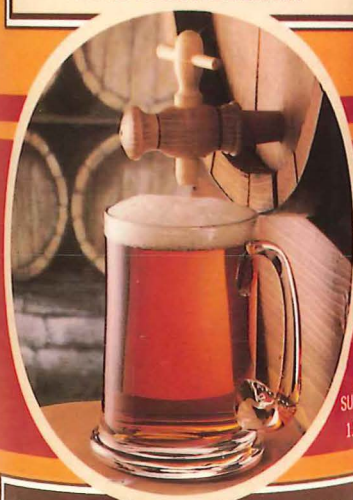
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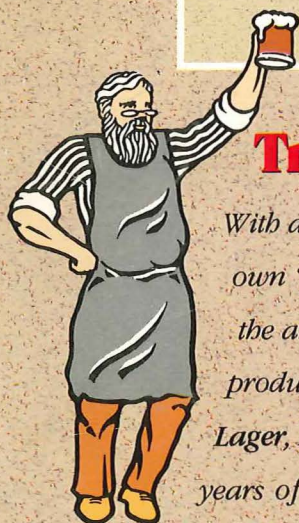
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