

Zymurgy

Vol. 15, No. 2
Summer 1992

Published by the American Homebrewers Association

\$5.00

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Be Suds Savvy
19 Brew Recipes
Wild Hop Your Brew
Satisfy Cider Cravings

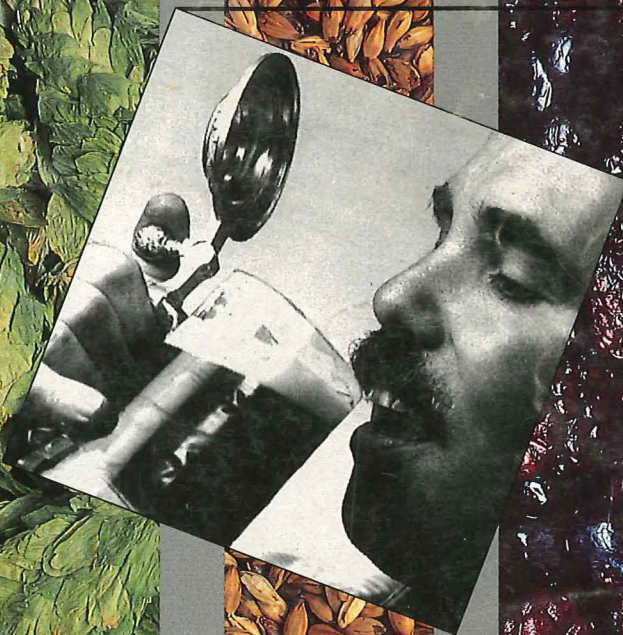
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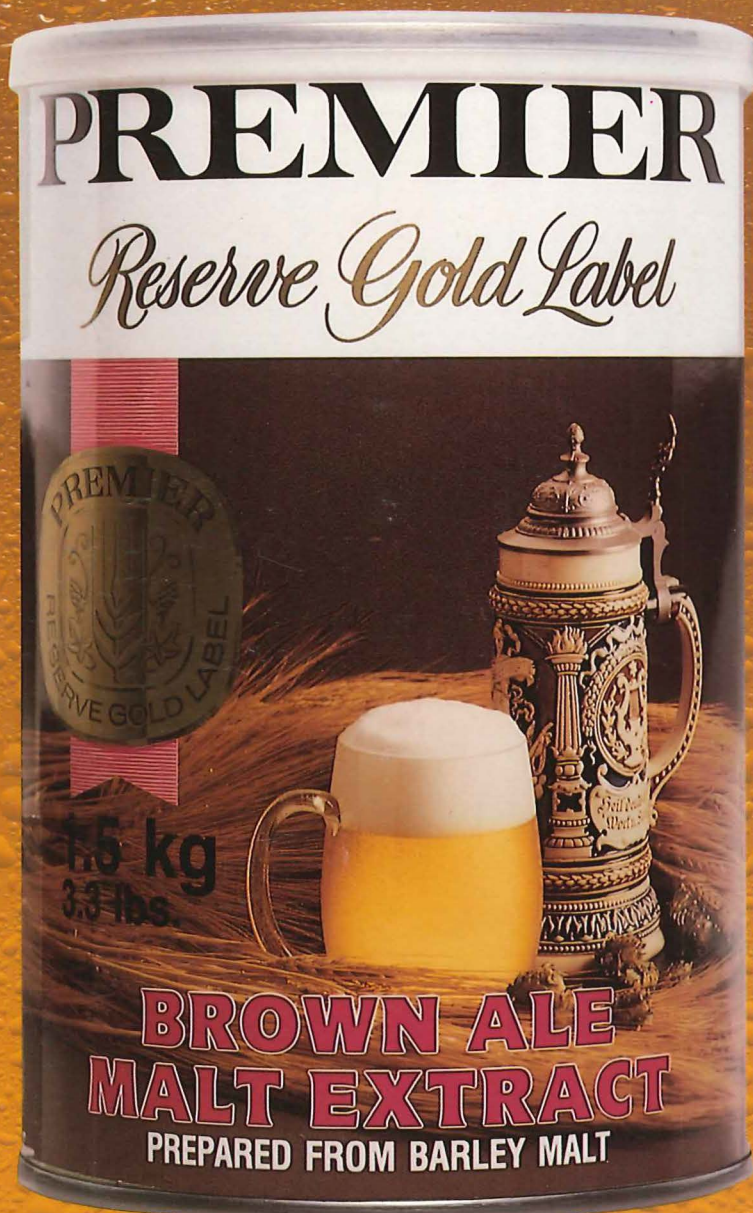
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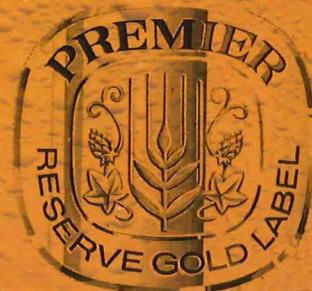
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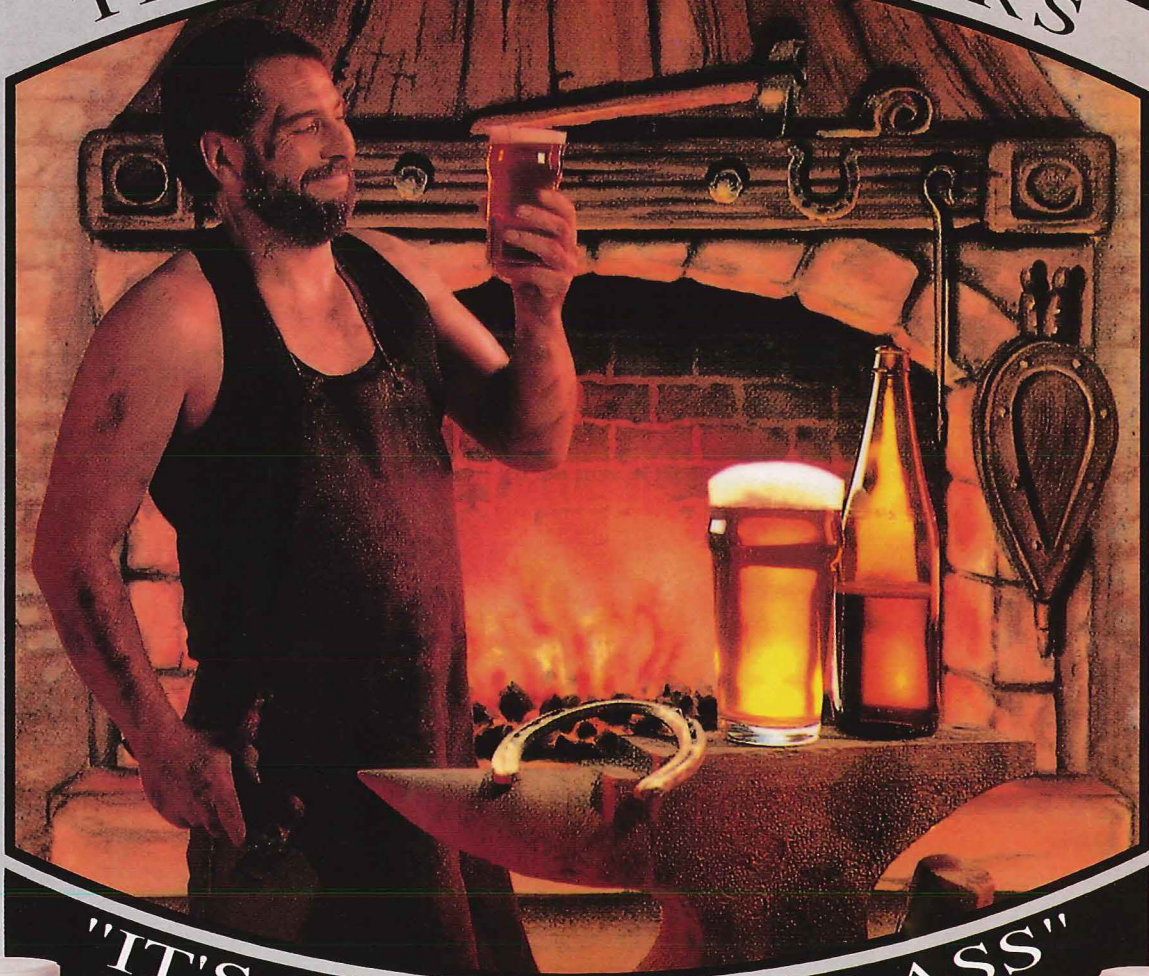
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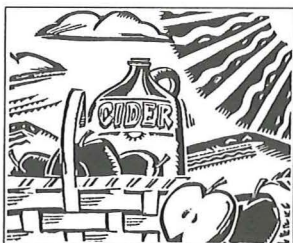


Zymurgy

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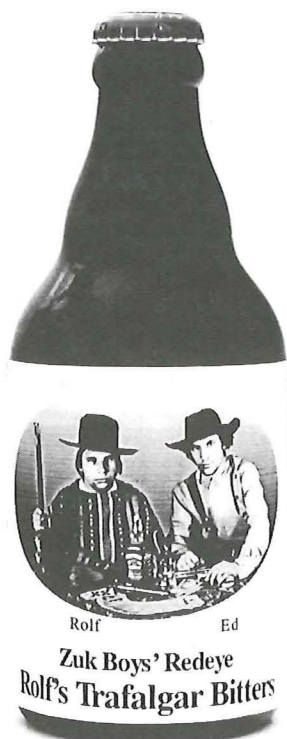


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Enjoy a spicy meal, amigo.

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zymurgy welcomes letters, opinions, ideas, article queries and information in general from its readers. Correspondence and advertising inquiries should be directed to *zymurgy*, PO Box 1679, Boulder, CO 80306-1679, (303) 447-0816, FAX: (303) 447-2825. All material © 1992, American Homebrewers Association. No material may be reproduced without written permission from AHA.

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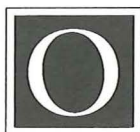
To promote public awareness and appreciation of the quality and variety of beer through education, research and the collection and dissemination of information; to serve as a forum for the technological and cross-cultural aspects of the art of brewing; and to encourage responsible use of beer as an alcohol-containing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

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EDITORIAL

CHARLIE PAPAIZIAN

Beer Does Not Make Good Times



ften when I sit with a large group of people listening to a speaker expound on the thoughts of the day, I have a difficult time paying total attention to what is being said. My eyes may drift to light coming through windows, or I stare at the back of the chair in front of me, or I may notice the fidgets and attentiveness of those around me.

You might say I'm not a very good listener in some situations. My mind is going in every direction. Listening to every third sentence from the podium, some words inspire thoughts of my own that lead to totally unrelated ideas that come around again to catch another thought from the front of the room and then go off and consider an implication or another idea. My eyes are open, but I don't see anything except the abstract materialization of ideas like a whirling dervish inside me.

In one such situation I was recently thinking about people and behavior—and a little bit about beer. And then after a while I was thinking a lot about beer and people and behavior. These thoughts weren't totally new, but in the quiet moments of being surrounded by a hundred people intent on their own ways of listening, I had run amuck. And not one person could tell, save for a blank expression on my face.

I recalled, "Beer makes good times. Beer is a pleasurable drink. Beer is a beverage of moderation. Homebrewing is a fun thing to do. Many people enjoy homebrew. Beer can promote good mental or physical health. Beer can cause poor mental or physical health." Pause. Wait. No. None of this was really true at all.

From my absorbed thoughts, I briefly became aware of all the different kinds of people around me and slipped back. I thought about the real meaning behind why people might say all those anthropomorphic things about beer; why even I could think these things. It wasn't the beer. It was the people.

It's people who are important. When someone comes up to you and takes the time to tell you they really like your beer, well, yes they may like the taste of your beer. But really what they are saying is that they like you for making it and for sharing it with them. The beer is secondary.

Beer doesn't make good times. People do.

There is no beverage of moderation. There are only moderate drinkers.

It's not that homebrewing is fun, but rather that people have fun while making homebrew.


Beer does not affect mental or physical health. People make choices for whatever reasons, consciously or unconsciously, to affect their mental or physical health.

People don't enjoy homebrew. They may like the taste of homebrew but even more, people enjoy being with people.

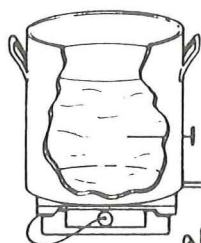
I don't think I'm alone with these thoughts. I believe it is easier for brewers to think about this and at least appreciate where I am coming from. Then there are those who would never for a minute acknowledge the human spirit that befriends and enjoys. They attach an anthropomorphic quality to beer as an alcoholic beverage. They believe and preach that behind the things we create there is a spirit with all the power of a manipulative person controlling our actions.

I believe there is a life-spirit that we convey to our brews and the work we do. It is simple and it contents us. Every homebrewer knows what I am speaking of. This life-spirit is different from what beer is all too easily imbued to be.

Next time you are with a great glass of beer, take the time to appreciate the feelings created by yourself and the people around you. Yes, the beer does taste great, doesn't it, but take a moment. . .

The session is over. I notice there are people all around me and they slowly get up, I along with them. And we walk out the door. Outside. 

*They may like the
taste of homebrew
but even more,
people enjoy
being with
people.*



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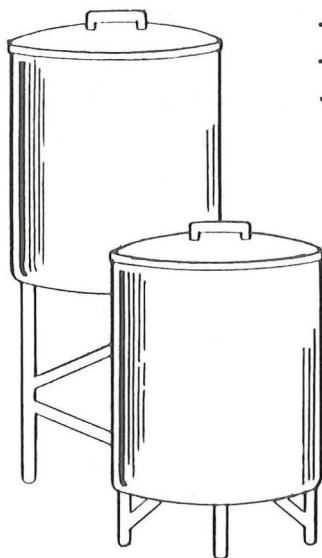
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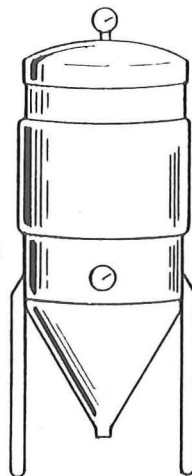
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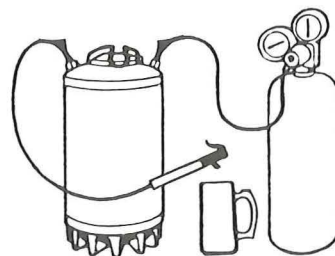
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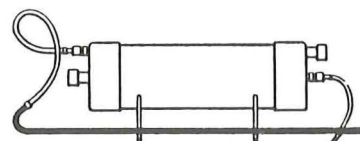
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DEAR ZYMURGY

OUR READERS

An Invitation From Down Under

Dear *zymurgy*,

John Jackson here from sunny Australia. I thought I would drop a line and let you know about the brewing competition we have every year. It attracts entries from as far away as New Zealand and other locations. I have competed in it for the last three years. This year I decided to enter under the AHA's name and it was a very good day.

Not only did I win first prize for lager but I also won the best beer of the show! I was amazed, to say the least. My beer was based on a *zymurgy* recipe so I suppose that would account for it. As they called out the results and the club name a couple of the other visitors seemed more keen than the rest and as soon as the prizes were handed out they introduced themselves as fellow members. One was John Hatcher from Mount Gambier, a very knowledgeable chap who was telling me he spent several months in the United States last year doing his beer judging accreditation course. The other was Brad Dawson, who is secretary of the Amateur Winemakers and Brewers Club of Adelaide, so I was in good company.

I was pleased to get the AHA's name up in lights as I have learned a lot from *zymurgy* and eagerly await its delivery every time. I hope in the next year or two to get to the annual beer competition to see how the brewers who compete in your show compare to our modest efforts here.

I always envy the choice of malts and other materials that you have available there. Supplies are a bit limited here but are improving as more people get into the brewing-at-home frame of mind.

We can buy our malt direct from Coopers' factory where they make the kits at a very reasonable price. They

are in the process of making wheat malt to sell in bulk so that should save a lot of effort—more time to relax, not worry and have a homebrew.

It was suggested at the last national Amateur Wine and Beer Show that some of your keener stateside members might like to enter next year's competition. This would surely set the cat among the pigeons competition-wise and would be great fun. The entry deadline for the 1992 Australasian Homebrewing Competition is Sept. 25, and the competition is Oct. 25. I would be happy to accept any prizes on behalf of members who cannot make it down for the show, then forward them. Any that make it down for the contest will be guaranteed a pint or two and a fairly good time with other enthusiasts.

I have been brewing for 14 years and my old mate who lives close by has been brewing for about 50 years or so. We usually have a session here on a Sunday morning where people drop in for a beer or two. If any fellow members are visiting Adelaide for the Grand Prix or touring they are welcome to call and try a few. My phone number is 326-0136, so a call when near would be appreciated.

I usually keep around 130 gallons in my maturing cupboards so it is well matured when it graces our glasses. Looking forward to meeting some of the faces and characters I read about in the near future.

Keep up the good work with *zymurgy* and good luck.

John H. Jackson
Morphett Vale, South Australia



Illustration by David Kammerzell

If you are interested in entering the Australasian Homebrewing Competition, write to James Spence at the AHA, PO Box 1679, Boulder, CO 80306-1679.

Record Keeping Inspiration

Dear *zymurgy*,

I particularly enjoyed the article by Ray Daniels, "Record Keeping Leads to Better Beer" in *zymurgy* Winter 1991 (Vol. 14, No. 5). Let me tell you why.

Stan (my roommate) brews beer and subscribes to *zymurgy*. I organize him—label his beer, index his magazines, arrange his beer storage and nag him about keeping better records. It took me six months to get him to take hydrometer readings, but now he insists that all our beer labels indicate what percent is alcohol free!

Stan has been brewing for about a year and a half and has yet to keep written notes. This form is great! Not only was I able to duplicate it almost exactly, it improved my knowledge of Word Perfect 5.1 at the same time. Stan may be too lazy to design a form or write notes on a blank piece of paper, but is perfectly happy to fill in the blanks.

Maybe now I can get him to repeat some of my favorites instead of continually trying new recipes. And since I now owe Ray a couple of bottles of Stan's beer, I'd like to know how I can get them to him and what styles he prefers?

Barbara Webster
Calgary, Alberta, Canada

Dear Barbara,

Thank you for the kind letter. They say the cleanest breweries make the best beer and I'm sure being well-organized helps too. I keep telling myself the record form makes up for a lot of other sins, but a large portion of my "brewery" has escaped organization. If you ever find yourself in Chicago, you are welcome to come by and show me a trick or two.

As for my favorite styles, I've never been able to resist a zesty pale ale or a rich, creamy porter. Lately I've also been enjoying the malty goodness of various bocks. I look forward to sam-

pling one of Stan's beers when we can hook up sometime—maybe at the AHA National Conference in Milwaukee, Wis., this summer.

Meanwhile, here's an idea. Next time he sneaks off with the guys, why not drag out the brewpot and make a batch yourself? Sounds like you'd be good at it, and you could join the growing legion of women brewers.

Best luck in all your brewing endeavors.

Ray Daniels
Chicago, Illinois

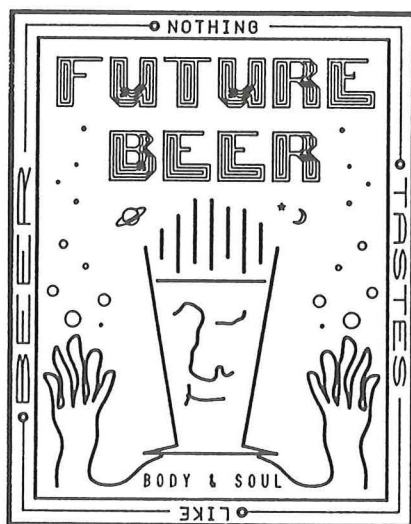
A Japanese Grammar Lesson

Dear *zymurgy*,

As a devoted and enthusiastic homebrewer, I always look forward to each issue of *zymurgy*. When it arrives I instantly drop all other activities and read it several times—cover to cover. Please keep up the high standards!

Regarding your "World of Worts" article in *zymurgy* Winter 1991 (Vol. 14, No. 5), as a non-native speaker of Japanese I need to point out the expression you meant to use is *shikata ga nai, nai* being the negation of the existence verb *arimasu*.

Relax, DWHAH, you didn't insult anyone's ancestry. *Shikata na gai* is not grammatically correct—it has no real meaning. *Nagai* does mean "long," both spatial and temporal. To combine *nagai* with *shikata* ("it takes] a long time to do") one would reverse



Label by Robert Drouth, Madison, Wis.

the order *nagai shikata* (as in learning Japanese!).

Tyler Cather
Morgantown, West Virginia

Scales and Other Brew Tools

Dear *zymurgy*,

Interesting article in *zymurgy* Winter 1991 (Vol. 14, No. 5) "Beer from Water." One point missed is how to obtain super accurate scales. Ammunition reloading scales will do perfectly. Accurate to one-tenth of a grain (437.5 grains to the ounce), they are cheap new, \$39.95 (Dillion Precision, (800) 421-7632) and are available used. Check with gun shops or friends who shoot.

Speaking of tools, an indispensable one is a Sharpie permanent marking pen. Use it to date yeast packets or hops, draw calibration marks on carboys, write the date brewed on bottle caps, etc.

Great magazine. Keep up the fine work.

Shane Henning
Gordonsville, Virginia

Leave a Note

Dear *zymurgy*,

In reference to your editorial "Odd Couples and Free Beer" in the *zymurgy* Winter 1990 (Vol. 13, No. 5) I have another suggestion: why not leave a note or comment card for the master brewer?

While visiting Frankenmuth Brewery in Frankenmuth, Mich., Master Brewer Fred Scheer was not available, so I left him a note with some comments. He was nice enough to send me a letter thanking me for visiting. It meant a lot to me that he would take time out of his busy day to respond to my note. (By the way, I bought a T-shirt and drink Frankenmuth Dark quite often.)

Thanks for a great magazine!

Daniel Jodoin
Livonia, Michigan

Southern Brewing Blues

Dear *zymurgy*,

I live in west central Florida and as Joe Mango states in his letter to

IT'S UNANIMOUS!



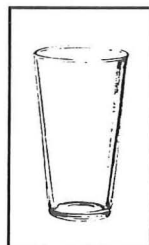
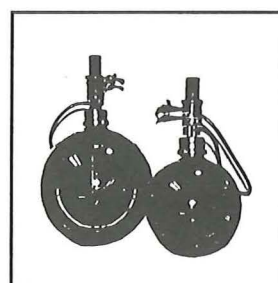
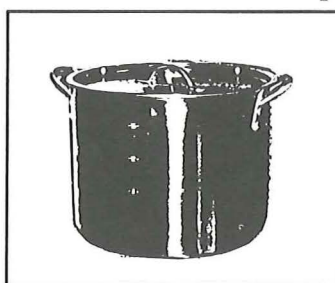
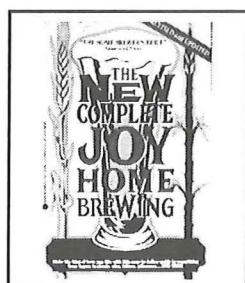
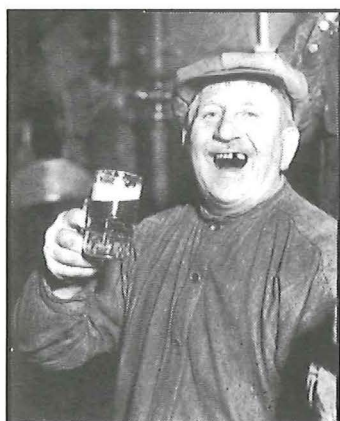
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Professor Surfeit in the *zymurgy* Winter 1991 (Vol. 14, No. 5) it is hard to brew at proper temperatures down here. I've had brews ferment out in one day.

What I did was purchase a second-hand 10-cubic-foot chest-type freezer for \$100. It has to be a chest type because an upright has no removable shelves and less volume.

I wanted the temperature to be where I could ferment both ales and lagers and also use it for storage. So I replaced the freezer thermostat with a

refrigerator thermostat. (Be careful not to bend the sensor bulb.)

I then set the control knob mid-range and, using a thermometer, adjusted the low and high range screws with a screwdriver while the unit was running. The freezer now stays in the 55 to 60 degree F (12.78 to 15.56 degrees C) range. When setting the new thermostat at mid-range by adjusting it, I can make it colder or warmer.

If you don't want to mess with changing thermostats, wiring or tinkering, there's a programmable refrig-

erator thermostat that would work. It's advertised in *zymurgy* Winter 1991 (Vol. 14, No. 5) on page 74.

At any rate, the unit has been running now for almost two years. I can fit four carboys and six soda kegs filled with my best and there is still room for more. It's not expensive to operate because the compressor doesn't have to work as hard.

I don't know anyone who has done this or would want to but it works for me. Maybe you could pass the word to Joe Mango or anyone else who has the problems we Southerners have.

Thanks for listening.

Dan Gilden
Largo, Florida

Getting Into the Homebrew Spirit

Dear *zymurgy*,

I've been a busy little brewmeister these past two years, since I discovered your great publication and the fun sport of homebrewing. I thought I had kept all this excitement to myself, all that "mystical stuff" that happens in my brewpot and the thrill of those wonderful brews. I thought it was my own little secret, especially the new "attitude" all this fun brings. At least I thought I kept it to myself.

While near the end of a 3,000-mile car trip with my family, the kids in the back seat finally reached that point all parents dread, when all the miles add up and the boredom exceeds the ability to cope. It was then that it happened. My wife turned around to the back seat and exclaimed, "Hey kids, relax, chill-out, have a homebrew!"

Now where do you suppose she heard a thing like that?

Fred Dowdy
Mercer Island, Washington

TROUBLE IS OUR MIDDLE NAME

Introducing the *Alternative Beverage Trouble Shooting Guide*. Because pitfalls, foibles, blunders, mishaps, and just plain rotten luck can occasionally dampen the spirits of even the most seasoned beer maker.

Face it folks, what we're dealing with here is chemistry. And every now and then. . .

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Correction

The phone numbers in the Nuttings Lake Publishing advertisement on page 13 of *zymurgy* Spring 1992 (Vol. 15, No.1) should have been (508) 667-7067 and (800) 232-5223.

ASSOCIATION NEWS

KAREN BARELA

Just Brew It! AHA Annual Conference

June 9 to 13, Milwaukee, Wis., is *the* place to go for four days of homebrew heaven. The 14th Annual AHA Conference on Quality Beer and Brewing, Just Brew It! will capture the essence of brewing and deliver it with a bang. Beginning June 9 with a tour of Milwaukee-area breweries and continuing through June 13 with an outdoor festival of fun, flavor, friends and fermentation, the Conference promises to be the best opportunity to experience the thrill of being able to Just Brew It! Speakers and special guests include Candy Schermerhorn, Mike Sharp, Martin Lodahl, Ray Daniels, Ron Downer, Dave Miller, George Fix, Thom Thomlinson, Steve Daniel, Don Hoag, John Judd, Alberta Rager, Jeff Frane, Robin Garr, Steve Casselman, Jay Hersh and Charlie Papazian. Beer seminars, second-round and best-of-show judging of the National Competition, beer and cheese tasting, Club Night, BJCP and National Competition awards, educational presentations and 400 or so homebrew enthusiasts all add up to the greatest homebrew experience on earth. We hope you join us.

The 14th Annual National Competition Four Sites, 2,371 Beers

For the 14th year, the AHA National Competition was an overwhelming success. Between March 16 and April 1, volunteers at Boulder Beer Co., Anchor Brewing Co., Boston Beer Co., Goose Island Brewing Co. and F.H. Steinbart Co. unpacked 2,371 entries of competition-ready homebrew, mead, cider and sake. Each entry was carefully and methodically separated from packing materials, secretly coded and diligently entered into a multipurpose

data base. Volunteer crews (see page 49) at each site had just a few days to organize the entries into 28 categories. Then came the judges. Between April 6 and April 22 all 2,371 beers were evaluated for their bouquet, aroma, appearance, flavor, body, drinkability and overall impression as appropriate for style. Then 336 beers were moved on to the second-round judging in Milwaukee at the Just Brew It! Conference. With the Competition narrowed to the best of the best, the judging became even more intense. First, second and third place in each category, plus the Ninkasi Award, Club High Point Winner and Homebrewer of the Year will be announced June 12 in Milwaukee. (For information on how you can access the names of winners via your computer, see below.) Watch for a complete list of award winners in *zymurgy* Fall 1992 (Vol. 15, No. 3).

CompuServe— Information at your Finger Tips

According to our 1991 membership survey, 83 percent of our members use a computer at work. Theoretically then, 83 percent of our members have access to the CompuServe network. CompuServe is a great way to access homebrewing information, from beginning brewing tips to highly advanced scientific information to the fun and abstract debates. More than one opinion is always available on any given subject, plus 16 brewing libraries covering a variety of topics.

The AHA uses CompuServe to keep in daily touch with homebrewers, to get timely information to the public and as an additional resource for brewing information. For those who are unable to attend the Just Brew It! National Conference, two nights of the Conference will be broadcast live.

Robin Garr, a CompuServe system operator and avid homebrewer, will be on hand during Club Night and the Grand Banquet to send out live coverage of Club Night and the National Competition award winners as they are announced. You can experience the thrill of being there by going online June 11 and 12. We encourage you to give CompuServe a try and are happy to give members \$15 of usage credit. Call the AOB offices at (303) 447-0816 to order your introductory packet. If you are a CompuServe member already, you can correspond via computer with James Spence at the AHA at #70740, 1107.

BJCP Grows 20 Percent

The Beer Judge Certification Program grew by 20 percent in 1991. We now have 348 Recognized Judges, 169 Certified Judges, 22 National Judges, three Master Judges and eight Honorary Master Judges. With an additional 179 people who have participated in Sanctioned Competitions, we have a total of 727 BJCP participants. The number of AHA and HWBTA Sanctioned Competitions continues to grow as well, allowing a greater opportunity for judges to accumulate experience points and move up in the BJCP program. Consequently, homebrewers entering Sanctioned Competitions are receiving constructive criticism, advice and accolades from well-trained judges. BJCP judges have a thorough understanding of the brewing process, the flavor components in beer and the historical development of world beer styles. Judges wishing to receive copies of their personal judging records simply need to contact the AHA. For information on how to become a BJCP judge, contact Karen Barela or James Spence at the AHA, PO Box 1679, Boulder, CO 80306-1679, (303) 447-0816 or FAX (303) 447-2825.

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Calendar News

Just a reminder that we are happy to print homebrew and beer-related calendar dates and contact information in the Calendar of Events. Simply mail or FAX the information to Karen Barela. Please keep in mind that editorial deadlines require receipt of information approximately three months prior to the date you receive *zymurgy* in the mail. However, between each issue we update the calendar daily and make it available to members. We also send a copy to Sanctioned Competition organizers and BJCP judges who are looking for exams and/or competitions in their geographic area. Copies of current calendars are available upon request.

GABF Acquires New Director

The nation's largest domestic beer festival returns to Denver, Colo., Oct. 2 and 3 as the Great American Beer Festival celebrates its 11th anniversary. The new festival director is Marcia Schirmer, who brings two years of experience as assistant director and 10 years of planning experience with the Colorado Music Festival to the Great American Beer Festival team.

The 1992 Festival will move to a new 65,000-square-foot hall at Denver's Merchandise mart, effectively doubling its size.

It will be the site of the largest draft beer system ever assembled in the world, handling more than 325 draft beers. For hotel, airline and ticket information, call or write the Association of Brewers, PO Box 1679, Boulder, CO 80306-1679; (303) 447-0816, FAX (303) 447-2825.

GABF Members-Only Tasting

Three divisions of the AOB have combined efforts to offer a Great American Beer Festival members-only tasting on Oct. 3 in Denver, Colo. Back by popular demand for a second year, the AHA is proud to offer members an exclusive opportunity to experience the GABF in a special atmosphere. Members of the American Homebrewers Association and the Institute for Brewing Studies who purchase a GABF

ticket and as professional brewers who participate in the festival are invited to a free, three-hour private tasting. We put this special tasting together to give members who are serious about beer the opportunity to taste, experience and share the festival's more than 500 beers in an uncrowded, subdued and professional atmosphere. For information on how to obtain tickets, call the AHA.

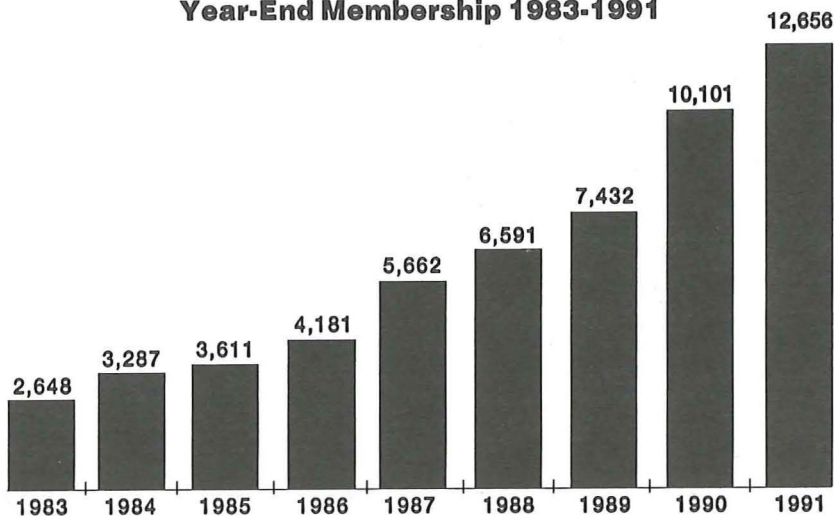
GABF Sponsors Homebrewer of the Year

For the second year, the Great American Beer Festival is proud to sponsor a trip for the 1992 Homebrewer of the Year. Jim Post, the 1991 Homebrewer of the Year, was last year's guest of honor. Post, who won with "Jamie Beer" Munich Dunkel, was treated to round-trip travel, accommodations and two nights of great beer tasting. The 1992 Homebrewer of the Year will be chosen from more than 2,000 entries and announced June 12 during the AHA Just Brew It! Conference in Milwaukee, Wis. Then, in early October, this talented homebrewer will be flown to Denver as guest of the 1992 GABF.

Membership Growth Continues to Skyrocket

AHA membership grew a whopping 25 percent in 1991. At year end, we had 12,656 active members, more than 2,500 above the 1990 membership (see chart). All indications point to similar growth in 1992. The AHA appears to be representative of an across-the-board growth in the homebrewing industry as a whole. As homebrewing continues to grow, so does access to better quality ingredients and equipment, and so does the amount of information available on this exciting and stimulating art/science. All of us at the AHA are dedicated to sorting and clarifying the information and presenting it to members in a friendly and usable way. As always, we welcome your comments and critiques and encourage you to contact us directly with your views. As we grow bigger, we hope to grow better. Personal contact with members will help us achieve this goal.

**American Homebrewers Association
Year-End Membership 1983-1991**



**American Homebrewers Association
A Division of the Association of Brewers Inc.
1991 Income and Expense Statement (unaudited)**

Revenues		1991
Membership and sponsorship	346,000	53.0%
<i>zymurgy</i> magazine sales	86,400	13.3%
<i>zymurgy</i> magazine advertisement sales	95,900	14.7%
National Conference	72,800	11.2%
National Competition	18,800	2.9%
Beer Judge Certification Program	5,000	0.8%
AHA-Sanctioned Competition Program	1,700	0.3%
Club-related Programs	800	0.1%
Merchandise and Sales (special publications, AHA-related sales)	24,000	3.7%
Total	651,400	100.0%

Expenses		1991
Marketing and Public Relations	36,500	6.8%
<i>zymurgy</i> magazine	166,600	31.1%
National Conference	47,800	8.9%
National Competition	21,900	4.1%
Beer Judge Certification Program	3,800	0.7%
Club Programs	4,500	0.8%
CompuServe and Sanctioned Competition Program	4,600	0.8%
Merchandise and Sales	17,700	3.2%
Overhead	233,500	43.6%
(salaries [not attributed directly to specific programs above], rent, taxes, insurance, utilities, postage travel, etc.)		
Total	536,900	100.0%

Note: AHA liability: deferred membership \$279,800

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

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**Chris Arnott, member of the Northside
Brewers homebrew club in Sydney,
shows off his flea-market bought grain
mill.**

Brewers Publications Announces Price Changes

Effective June 1, there will be some changes to AHA member prices for books published by Brewers Publications. After that date, Brewers Publications will offer books at substantially discounted prices to AHA members only during special Members-Only sales.

Brewers Publications hopes to improve its operations and subsequently offer even more books on beer and brewing by adapting operating procedures used throughout the publishing industry—namely, a single retail book price. To continue supporting the AHA and its members, Brewers Publications will offer new book releases to AHA members at a discount through Members-Only sales, to be made directly to AHA members through flyers sent to your home and advertisements in *zymurgy*.

A Traveling Charlie Goes

Charlie Papazian, president of the American Homebrewers Association, traveled to Australia for the Institute of Brewing Australian/New Zealand Convention in late February. He also met with hundreds of homebrewers and several homebrew shop owners in the Sydney and Melbourne area. In



A visit with the Amateur Brewers of Victoria was one of the many pauses Charlie Papazian, AHA president, made during his recent visit to Australia. Before attending the Institute of Brewing, Australia and New Zealand Section's Convention in Melbourne, Papazian visited homebrewers and microbreweries in Sydney and Melbourne areas. Although he didn't get to sample Rauchbier made with malt smoked with lemon-scented eucalyptus, he did enjoy hundreds of other fine beers which prove that quality-made homebrew and microbrew is brewing in Australia!

March, Liberty Malts, a homebrew shop in Seattle, Wash., sponsored a homebrewers gathering with Papazian as special guest. He visited several breweries and met with homebrewers in the area to discuss recent trends in brewing. In April, Papazian went south to Orlando, Fla., courtesy of the Central Florida Homebrewers Club which sponsored a beer seminar, *The New Complete Joy of Home Brewing* book signing and a BJCP exam proctored by Papazian.

Whenever he travels on Association of Brewers business, Papazian looks forward to meeting local homebrewers and visiting shops and breweries. His trips are often sponsored by shops, clubs and/or breweries and special events are arranged for him by the sponsors.

April 26 to 29, Papazian, Karen Barela, Elizabeth Gold and Linda Starck joined the staff of the Institute for Brewing Studies for the National Microbrewers and Pubbrewers Conference and Trade Show held in Milwaukee, Wis.

New Staff

Drawn to Boulder on a whimsical spur-of-the-moment decision, Andrea

Baumgardner joins the staff as circulation assistant. A recent graduate from Macalester College in St. Paul, Minn., Baumgardner has been enjoying Boulder's easy access to the Rocky Mountains. Echoing her sentiments is Vicki Hopewell, who joins our production team as a graphic designer. Hopewell studied illustration at Syracuse University in New York and, upon graduation, moved to Boulder for the skiing, weather and ambience.

zymurgy Welcomes Contributors

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

1993 Conference

Portland, Ore., is the destination of the 1993 Conference on Quality Beer and Brewing in August. Several combined factors make Portland an ideal choice for our annual homebrew gathering. Portland is home to nine suc-

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successful small breweries and brewpubs producing 30 to 40 fresh-made beers. Some of the best-known breweries include Bridgeport Brewery, Blitz-Weinhard Brewing Co., Portland Brewing Co., Widmer Brewing Co. and McMenamin Breweries. The Portland Visitors Association is available to help guide attendees and their families in their choices of vacation side trips. Whether it's the beautiful Pacific Coast or the spectacular Cascade mountains, the Northwest is a wonderful place to see. Another exciting option is the opportunity to experience the Oregon Brewers Festival. We moved our Conference dates to August in order to take advantage of this annual event. The Conference is Aug. 9 through 12. The Oregon Brewers Festival is also in August. An all-star cast of educational speakers, traditional brewing events, the Oregon Brewers Festival and an estimated 500 attendees add up to a Conference you won't want to miss. Mark your calendars now and look for details in coming issues of *zymurgy*.

BREW NEWS

JAMES SPENCE

Draft for the Drought

Drought-plagued Swaziland villagers use an alcoholic drink called "umganu" to mitigate their sorrows. The drink is made by mixing sliced marula fruit, water and sugar in a plastic bowl and sealing the container with mud. Within a week the brew is ready to drink. Women often sit by the roadside during the three-month marula fruit season and sell umganu at 50 cents a cup to busloads of passengers. Liquor store owners complain that the beverage hurts their business, while shebeens—make-shift taverns—buy large quantities to supply their customers.

Marula fruit is rumored by to have magical powers and is a major part of the life and culture of Swaziland. Elephants are said to become drunk after eating the fruit, which ferments in their stomachs. The juice is used in rituals by the Tsonga people and Zulu women rub its oil on their skin to make it shine.

100 Years of Crown Caps

Feb. 2 marked the 100th anniversary of the bottle cap. William Painter invented the cap in 1892 after seven years of experimentation. One of his prototypes was a flat, canvas-covered rubber disk to be pushed into the bottle neck and held by a groove. Still dissatisfied, Painter came up with the "crown cork," a metal disk with a pleated flange lined with cork and waterproof paper. His design remains virtually unchanged today. Painter convinced skept-



Illustration by Janz David Lackner

tics that his cap was feasible by sending bottles to South America by ship. They returned with seals intact.

Ladies of the Club

John Miller, licensee of the Triangle Tavern in Suffolk, England, says he wants his female customers to have a place and time to drink and chat in comfort. To that end, he has set aside a section of his bar on Wednesday afternoons as women-only. The Equal Opportunities Commission has indicated that Miller's plan is illegal under the Sex Discrimination Act.

Oktoberfest Grounds Become Homeless Haven

Prefabricated metal huts were set up on the Oktoberfest fairgrounds in Munich to accommodate 150 foreigners seeking asylum. According to Reuters, the fairground complex, host

to the world-famous beer festival every autumn, is such an institution in Munich that erecting the huts would be like setting up housing for immigrants under the Eiffel Tower in Paris or the Statue of Liberty in New York harbor.

A Pint is a Pint is a Pint

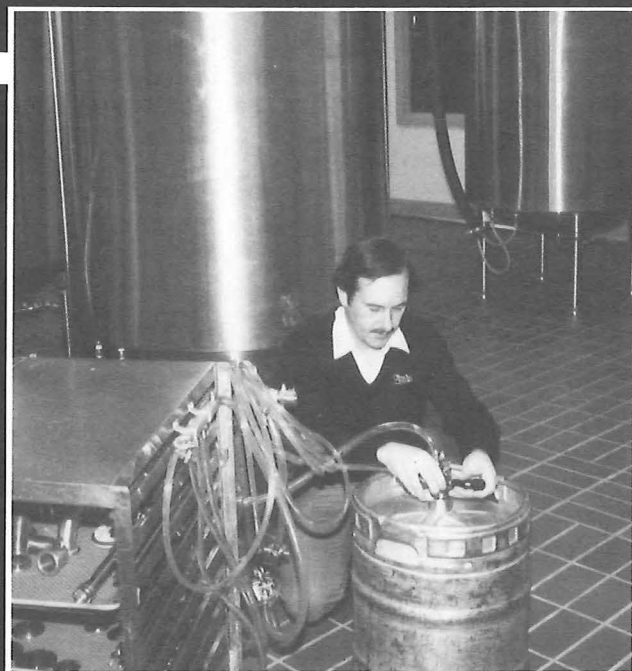
A new regulation in Britain assures beer drinkers that they are getting their pint's worth. The head doesn't count in the pint measure—bartenders must pour a full pint of liquid beer. Some drinkers are worried that the new rules will force bars to

charge more for their beer, because new glassware must be purchased to accommodate a pint of liquid plus the head. Consumer Affairs Minister Edward Leigh said the new regulation will take effect April 1, 1994. Each pub and club in Britain will have to spend an average of \$6,100 for new glasses and possibly new pumps, according to a the Brewers Society spokesman.

Porter Yeast Survives In Sunken Ship

Dr. Keith Thomas, a 39-year-old microbiologist and brewing consultant at the Polytechnic of North London, recovered two bottles of porter from a ship that sank in the English Channel in 1825. The beer tasted terrible, according to the New York Times News Service, but Thomas discovered that some yeast had survived their 165-year underwater stay. After months of

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The New Brewer

THE MAGAZINE FOR MICRO AND PUB-BREWERS

meticulous culturing to rehabilitate the weakened yeast, Thomas had enough to start brewing his own porter. Using a recipe from 1850 found in the Whitbread PLC archives, he created Flag Porter and Bottle Green, two brands his wholesaler hopes to export to the United States this year.

Thomas believes the yeast survived because the bottles were tightly sealed with cork stoppers and wax seals and were kept cold 60 feet under the channel.

Dublin Draft in a Can

Beer drinkers who have hungered for the true taste of draft Guinness may not have to wait much longer. Guinness has unveiled Pub Draught Guinness, a new product using sophisticated technology to dispense their beer from a can in much the same way commercial draft systems do. The beer comes in a can fitted with a plastic device with a cavity in the bottom. The can is filled with beer and a small amount of liquid nitrogen. When the can is sealed, pressure

from the nitrogen forces some of the beer into the cavity. When the beer is opened, the trapped beer and nitrogen are forced rapidly through a pinhole in the plastic device producing a rich, creamy head that lasts to the bottom of the glass. The Guinness cans are being sold in the San Francisco, Calif., Chicago, Ill., Baltimore, Md., and Washington, D.C., areas.

Caseloaded Forklift Operator Caught

An Associated Press story reports that William Hardacre, 40, was arrested after traveling six blocks on a forklift loaded with 30 cases of beer stolen from the City Beverage Co. of Huntington, Ind. The police received a tip from someone who saw Hardacre traveling down the street. The tip may not have been necessary—Hardacre left a trail marked by broken cases of beer.

German Beer Still Pure

The new European Economic Community is allowing Germany to con-

tinue its ban on the use of sweeteners in beer brewed according to the German Beer Purity Code. An *American Brewer* article states that foreign brewers in Germany may use the sweeteners, including aspartame, saccharin and sorbitol, but may not market their beers as being brewed according to traditional German brewing methods.

AHA SANCTIONED COMPETITIONS

1991 Dixie Cup

The 1991 Dixie Cup in Houston, Texas, drew nearly 550 entries. The Oct. 19 competition was sponsored by Defalco's Home Wine and Beer Supplies.

BOSS Challenge

Rob Reed of Kokomo, Ind., won best of show at the Brewers of South Suburbia competition in Frankfort, Ill. Reed's Helles Bock beat 75 other entries at the Nov. 9, 1991 contest.

Northwest Novemberfest

Kirkland, Wash., hosted the Northwest Novemberfest on Nov. 9, 1991. Rob Nelson of Duvall, Wash., bested 83 beers vying for best of show with a dark mild.

13th Annual California State Homebrew Competition

Alec Moss organized the 13th Annual California State Homebrew Competition on Nov. 10, 1991 in San Francisco. The competition judged 177 entries in 13 categories.

Taste of the Great Lakes

Mike Preston of Royal Oak, Mich., topped 144 beers to win best of show at the Second Annual Taste of the Great Lakes Midwest Regional Homebrew Competition in Frankenmuth, Mich. Mike O'Brien organized the Nov. 16, 1991 competition.

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Seffner, FL

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— T. Graff, Queensbury NY

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TRUB Open

The Third Annual Triangle Unabashed Homebrewers Club Open had 100 beers entered in nine categories. Jeb Sturmer organized the Nov. 16, 1991 competition in Durham, N.C.

Happy Holiday Competition

Bill Batzer's barley wine won best of show at the Happy Holiday Homebrew Competition in St. Louis, Mo. Batzer, of O'Fallon, Mo., beat 124 other entries in the Dec. 14, 1991 contest.

Bay Area Brewoff

More than 150 beers were entered in the Bay Area Brewoff in Dublin, Calif., on Jan. 25, 1991. Bob Jones of Alamo, Calif., organized the competition.

Wort You Brewin'?

Jack Hagens of Seattle, Wash., won a trip to Boulder Colo., for besting 130

beers in the Feb. 8, 1991 Wort You Brewin' competition in Vancouver, British Columbia, Canada.

MICRO AND PUBBREWERIES

(Information provided by the Institute for Brewing Studies.)

OPENINGS United States

Regional Breweries

Minnesota: Minnesota Brewing Co., St. Paul

Microbreweries

Pennsylvania: Arrowhead Brewing Co., Chambersburg

Texas: Celis Brewery, Austin
Brewpubs

Colorado: Baked in Telluride/Brewed in Telluride, Telluride

California: Brewski's Gaslamp Pub, Bistro and Brewery, San Diego; Gordon Biersch Brewing Co. (No. 3), San Francisco

Illinois: Weinkeller Brewery (No. 2), Westmont

New Mexico: Taos Brewery at the Chile Connection, Taos

Canada

Ontario: Great Lakes Brewing Co., Etobicoke

CLOSINGS

United States

Colorado: Old Colorado Brewing Co., Fort Collins

Florida: Florida Brewing Co./Miami Garlic Grill & Brewpub, Miami

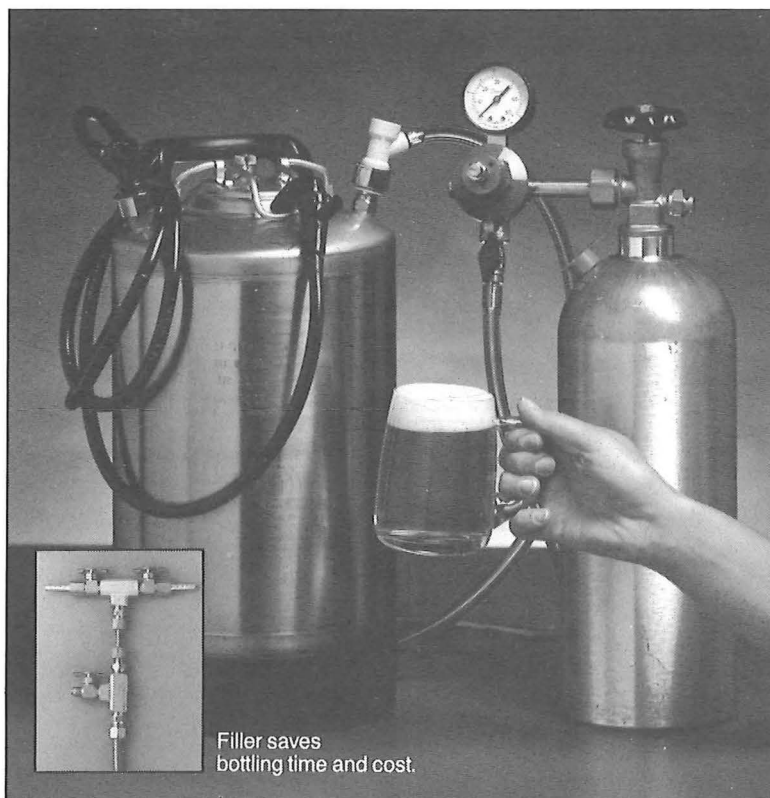
Pennsylvania: Happy Valley Brewery, State College

Canada

British Columbia: Leeward Neighborhood Pub, Comox

New Brunswick: Bavarian Specialties Canada/Hanshaus Brewery, Moncton

Ontario: Diamond Hill Brewpub, Richmond; Mash McCann's, London Pub & Brewing.



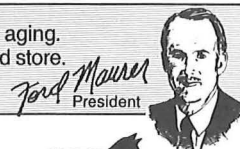
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CALENDAR

OF EVENTS

1992

JUNE

- 10-13 AHA National Homebrew Conference, Just Brew It!**, Marc Plaza Hotel, Milwaukee, Wis. For complete information, call the AHA at (303) 447-0816.
- 19 Edmonton Homebrewers Guild Open Competition, AHA Sanctioned Competition**, Edmonton, Alberta, Canada. Entry deadline is June 12. Contact Geoff Kuziw at (403) 479-3771.
- 20 BJCP Exam**, Orono, Maine. Contact Patrick Baker at (203) 227-8028.
- 27 Colorado Brewers Festival**, Old Town Square, Fort Collins, Colo. Call Coopers Smith's Pub & Brewing at (303) 498-0483.

JULY

- 11 Mazer Cup Mead Competition, AHA Sanctioned Competition**, Ann Arbor, Mich. Contact Ken Schramm at (313) 377-8680.
- 17-19 Oregon Brewers Festival**, Waterfront Park, Portland, Ore. Call Widmer Brewing Co., (503) 281-2437 or Bridgeport Brewing Co., (503) 241-7179.

AUGUST

- 3 Weiss is Nice, AHA Club-Only Sanctioned Competition**. Entry deadline is Aug. 3. Contact the AHA at (303) 447-0816.
- 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.
- 15 1992 Milwaukee Irish Fest Stout, Ale and Mead Competition, AHA Sanctioned Competition**, Milwaukee, Wis. Entry deadline is Aug. 8. Contact Richard O'Connell at (414) 482-2558.
- 15 Second Annual Rocky Mountain Beer Festival**, Snowmass, Colo. Contact Linda Kleaver, Snowmass Resort Association, (303) 923-2000.
- 22 New Mexico State Fair Pro-Am Beer Competition, AHA Sanctioned Competition**, Albuquerque, N.M. Entry deadline is Aug. 14. Contact Guy Ruth at (505) 294-0302.
- 22 1992 Michigan State Fair Homebrew Competition, AHA Sanctioned Competition**, Ann Arbor, Mich. Entry deadline is Aug. 8. Contact Daniel McConnell at (313) 663-4845.

- 22 1992 Los Angeles County Fair Homebrew Beer Competition, AHA Sanctioned Competition**, Pomona, Calif. Entry deadline is Aug. 1. Contact Bruce Brode at (310) 558-8458.
- 31 Sonoma County Fair Homebrew Competition, AHA Sanctioned Competition**, Santa Rosa, Calif. Contact Norman Dickenson at (707) 523-1565.

SEPTEMBER

- 19 Vailfest**, Vail, Colo. Contact Deborah Ramsey at (303) 476-1000.
- 26 Trub 4 - Brews and Blues, AHA Sanctioned Competition**, Durham, N.C. Contact Jeb Sturmer at (919) 544-6222.
- 27 Fest Brew Competition**, Modesto, Calif., co-sponsored by St. Stan's Brewery and SAAZ Homebrew Club. Contact Ray Call at (209) 478-6170.

OCTOBER

- TBA 1992 Oktoberfest Best Bier Competition, AHA Sanctioned Competition**, Waldoboro, Maine. Contact Dennis Hansen at (210) 594-8073.
- 1 Best of Fest, AHA Club-Only Sanctioned Competition**. Entry deadline is Oct. 1. Call the AHA at (303) 447-0816.
- 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.
- 17 Northern New England Regional HBC, HWBTA-Sanctioned Competition**, Portland, Maine. Contact Mark Peterson at (207) 737-8755.

NOVEMBER

- TBA Hops Bops, AHA Sanctioned Competition**, Philadelphia, Pa. Contact Bob Grossman at (609) 547-7980.
- 7 Taste of the Great Lakes Conference and AHA Sanctioned Competition**, Frankenmuth, Mich. Entry deadline is Oct. 2. Contact Fred Scheer at (517) 652-3882.

DECEMBER

- 1 Barley Wine is Fine, AHA Club-Only Sanctioned Competition**. Entry deadline is Dec. 1. Contact the AHA at (303) 447-0816.

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.

JACKSON ON BEER

MICHAEL JACKSON

How Porter and Stout Went Global

As a small boy I waited opposite a pub each morning for the school bus. Too young to read a paper, I studied the text above the door of the pub: *Licensed to sell tobacco, ale and porter.*

What, I wondered—with an inquisitiveness that would serve me well—was porter? No one seemed to know. Porter had long vanished from England but survived in exile, to return when I was old enough to know it.

The burly Mr. Porter and his stocky younger brother Stout have matched their names. Look up stout in the Oxford dictionary, and it will tell you doughty, resolute, sturdy, stubborn, staunch. It may be a London-Irish drink, but it has Yorkshire virtues. Doggedness, especially.

On their travels, porter and stout have lingered in many interesting corners of the world, as befits a dark, impenetrable, mysterious duo, blending in the shadows.

In a former tram shed (now a microbrewery) in New Haven, Conn., a fundamentalist Christian and former Yale oarsman named Blair Potts introduced me to a black Labrador: "Meet Blackwell, now a dog, but soon to be a stout." Next time I met Potts the brewery had produced Blackwell Stout—chewy, nutty, coffeeish and not a hint of wet dog.

How is this for an overlay of allusions? At the Chapter House pub in the university town of Ithaca, N.Y., I sampled a product called Moravian Porter, made in Vernon Valley, N.J. It had a dash of chocolate maltiness, but was, I regret to report, on the thin side.

A week later at the Sansom Street Oyster House in Philadelphia I crept upstairs to a bar that felt illegal (though it wasn't) and engaged in faintly furtive banter with a member of the city council who should have been attending to his business (or perhaps he was).

We drank George Washington's Porter, brewed on the premises. It had the tang of burned treacle toffee.

Next day I headed out, following the river Schuylkill to the old coal mining town of Pottsville, Pa., to visit D.G. Yuengling and Son, the oldest brewery in the United States, founded in 1829 and on its present site since 1831.

The brewhouse has a stained-glass ceiling and murals, and some of the lagering cellars were mysteriously bricked up during Prohibition. The head brewer, by the splendid name of Narciss Norbert, has been there since 1947.

What is their most famous product? The celebrated Pottsville Porter, of course, soft and licorice-tasting with a hint of dryness in the finish. They even blend the porter with lager and sell it on draft as Black-and-Tan.

In the Pennsylvania town of



Wilkes-Barre, where they dug anthracite until the Susquehanna River flooded the mines, the Lion brewery makes another licorice-tasting porter but with more malty firmness, under the Stegmaier label.

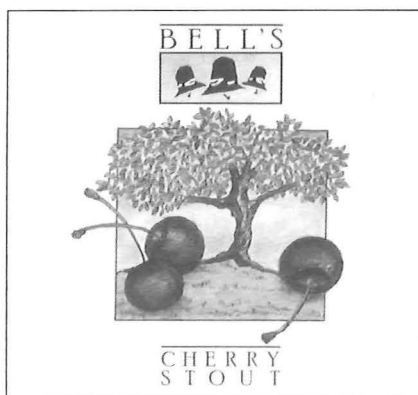
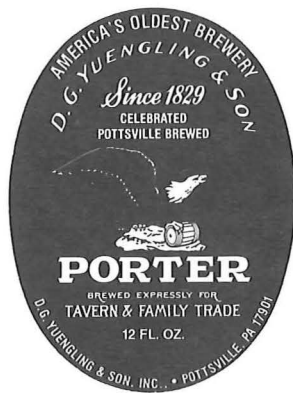
Stegmaier was the rival brewery, and its magnificent buildings still stand in dilapidation. The grand facade has a relief proclaiming the stable block. The horses went to the knacker's yard, but the porter survives.

These two coalfield brews are bottom fermented (at warm temperatures), but ale yeasts are used to produce the sweetish Black Forest Porter from the Columbus Brewing Co. (Ohio) and the powerful Cherry Stout of the Kalamazoo Brewing Co. (Mich.).

The best in the Midwest may well be the top-fermenting, smooth Great Northern Porter from Summit, in Minneapolis-St. Paul.

Beyond the lakes and across the Rockies, Denver's Wynkoop brewery has its appropriately herbal-tasting Sagebrush Stout.

On the West Coast you can choose between the creamy Anchor Porter (now available in your local pub); the impeccably balanced Sierra Nevada Porter; the silky Oatmeal Stout from the Rogue brewpub in Ashland, Ore.; the dry, oily Black Butte Porter and the sweeter Obsidian Stout from the Deschutes Brewery in Bend, Ore.; the toffeeish Double Stout from Bridgport, Portland, Ore.; the mysteriously appetizing Sphinx Stout of Pyramid Brewing Co., Kalama, Wash.; the



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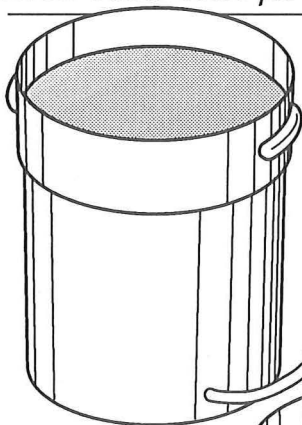
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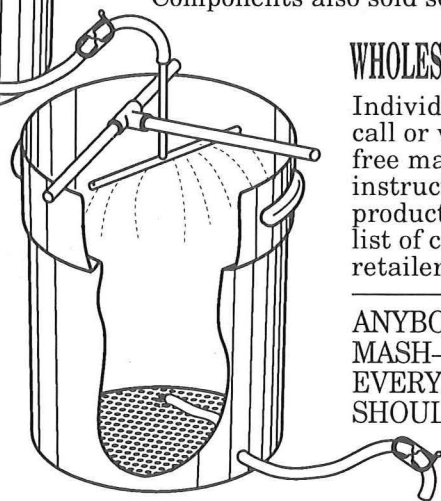
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honey-charged Imperial Stout from Grant's of Yakima, Wash.; the toffeeish Blackhook Porter and the delicious Pike Place 5X Stout (now 1.072), both from Seattle.

From there, you could head across the Canadian border to the Okanagan Valley to sample the coffeeish Old English Porter, one of the best in Canada. Watch out for the powerful Cold Cock Porter from Calgary.

Anyone going west at this point finishes up in Japan, where Kirin does a 1.072 bottom-fermenting stout that tastes of treacle toffee. Then on to China to sample the sweet Tsingtao Porter.

After that, there are tough choices for porter and stout. One route heads south to Singapore for the medium-dry ABC Extra Stout; Sri Lanka for Sando Stout or Lion Stout, the latter from a cask at the Beer Shop in Nuwara Eliya, or U.K.D. Silva's in Kandy; then on to Africa for local stouts in the style of Guinness Foreign Extra, and sometimes sweeter.

On to Australia for the tasty Carbine, the dryish Sheaf, the earthy Cooper's Extra Stout, among others. You could even loop back by way of the Caribbean to try the sweet Dragon Stout of Jamaica and the dry, fruity Prestige Stout from Haiti, and more.

The other route heads north and west to the Soviet Union. My quests for the "original" Russian stout and other dark shadows of the Baltic and Nordic lands have been documented previously. That is not to say you won't hear more in the future.

Two top-fermenting favorites, the very roasty Koff Porter from Finland and the burnt-tasting Carnegie from Sweden, have yet to appear in Britain, but there have been sightings of Ceres Jutland Porter, sometimes labeled "stowt" in its home country.

This product is one of several bottom-fermenting, treacle-toffeeish, strong porters with an international Brettanomyces infection (to give it the "British character"). I believe Germany still has at least one bottom-fermenting porter, made by Hoepfner of Karlsruhe, but I have yet to taste it.

I wonder whether the school bus will come. . . ?

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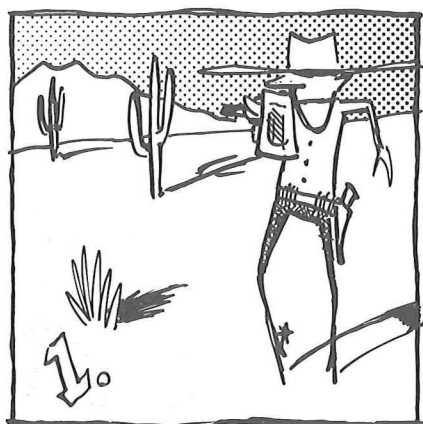
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HOMEBREW COOKING WITH THE BREWGAL GOURMET

CANDY SCHERMERHORN

Enjoy a Sensational Southwestern Meal



Ceiling fans turn slowly in the hot humid air while the festive sounds of slightly out-of-tune guitars grow louder. The mariachi band approaches, extending a welcome as if you were a long-lost relative. A pretty young waitress arrives at your table, her traditional white blouse and multicolored skirt accented by a fresh red hibiscus adorning her jet-black hair. Smiling, she deftly offers an old bucket filled with iced-down bottles of cerveza.

Wiping the cold bottle across your brow grants temporary relief from the heat. She explains in broken English that there is no need for a menu because they make only one "special of the day." You place an order, sit back and let the golden cerveza trickle down your throat. In what seems like only

minutes, your food arrives sizzling hot, spicy and delicious.

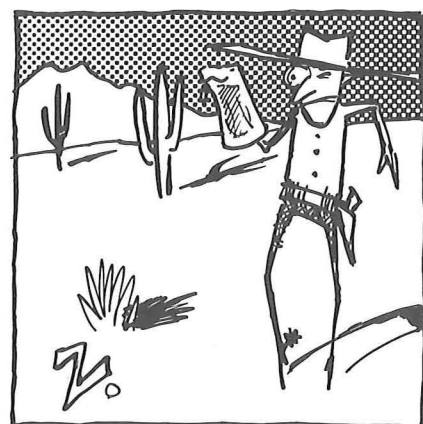
As the mariachis retreat to a distant table playing "La Cucaracha," you notice the object of their song scurrying across the floor only feet away. You console yourself with the thought that you are the intruder into his domain and it is he who somehow seems completely at home. Regardless, there is no place you would rather be than eating, drinking and basking in the peasant ambiance of this border-town cantina.

A detailed explanation of the ingredients and nature of an authentic Southwest or Mexican meal would fill an entire issue of *zymurgy*. Therefore, simply furnishing a fleeting glimpse behind the doors of a common, unpretentious establishment and presenting a selection of recipes must suffice.

As for using beer in the preparation of these recipes, it seems only natural because the water of Mexico is, after all, rather notorious. Combine this with the fact that the first brewery was established in the 1500s and voilà, we have numerous opportunities to use pure, unadulterated beer in preparing this dazzling fare.

Southwest Stuffed Steak

This is one of the most memorable methods of preparing steak you will



Illustrations by John Martin

ever encounter. Rubbed with spices and beer, stuffed with beer-sautéed onions, herbs, sour cream and cheese, it is a magnificent eating experience. The spicy marinade can be used on chops, roasts or other cuts of meat.

- 2 teaspoons toasted coriander seed*
- 1/2 teaspoon toasted cumin seed*
- 2 teaspoons mild chili powder, toasted
- 1/2 to 1 teaspoon hot chili powder, toasted
- 1/2 teaspoon fresh ground black pepper
- 4 cloves crushed garlic
- 3 tablespoons Vienna-style beer
- 2 tablespoons olive oil
- 3 pounds London broil or boneless top sirloin, 1 1/4 inch thick

*To toast spices, heat a heavy skillet on medium heat. When hot, remove from heat and add the spices, shaking the pan until they become lightly toasted and fragrant.

(1) Use a sharp, thin-bladed knife to cut a large pocket in the side of the steak extending to within 3/4 inch around the edge.

(2) Combine the remaining ingredients and rub generously over the steak and inside the pocket. Wrap the steak and allow it to rest at room temperature for one hour, or four to six hours in the refrigerator. If refrigerated, remove one hour before cooking.

Steak Filling:

- 1 to 2 tablespoons olive oil
- 2 medium onions, coarsely chopped
- 1/3 cup Vienna-style beer
- 2 large cloves garlic, finely minced
- 1 to 2 yellow "banana" chilies,* finely minced
- 2 teaspoons dried oregano, crumbled
- 1/2 cup sour cream
- 5 to 6 ounces Asiago, Ranchero or Muenster cheese, crumbled toothpicks

(1) Heat the olive oil over medium heat, sauté the onion until limp. Add the beer and continue to cook until a deep golden brown. Add garlic, chili and oregano and sauté for two minutes. Remove from heat and cool.

(2) Stir the sour cream and crumbled cheese into the cooled onions. Gently stuff the mixture into the steak. Skewer the pocket closed with toothpicks.

(3) Grill or broil the steak over medium-high heat for 10 to 12 minutes per side. The meat will be nicely browned on the outside and the center will be medium rare.

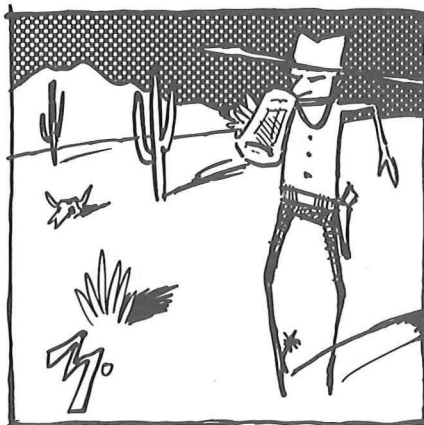
* If you fancy the firestorm force of jalapeños, use them in place of the yellow banana chili.

Frijoles Borrachos

A classic addition to any Southwest meal, the name translates as "drunken beans" because of the beer.

- 4 cups pinto beans
- 3 cloves garlic, peeled and mashed
- 1 large onion, chopped
- 1 teaspoon hot chili powder
- 1 teaspoon freshly ground black pepper
- 2 12-ounce bottles of American light lager
- 2 teaspoons salt
- 1/2 to 2/3 cup margarine, oil or lard

(1) Rinse the pinto beans thoroughly in a colander and remove any rocks or damaged beans. Place them in a large dutch oven, cover with 8 cups of water and bring to a rapid boil for five minutes. Remove from the heat, cover and allow the beans to set for one hour to reduce their methane-producing qualities.



(2) Drain the beans, add the beer, enough water to cover plus 2 additional cups of water. Toss in the garlic, onion, chili, pepper and salt. Partially cover the pan and simmer until tender and most of the liquid has been absorbed (1 1/2 to 2 hours). Beans may be used for frying immediately or cooled and refrigerated up to three days before using.

(3) To mash the beans use a potato masher or an electric mixer.

(4) To reify, melt 1/4 to 1/3 cup of margarine over medium-low heat in a heavy 10 or 12-inch skillet. Add half of the mashed beans and simmer, stirring constantly. Continue cooking and reducing the liquid until the beans acquire a "fried" quality (consistency is your choice—from runny to thick). Repeat with the remaining beans. Taste and adjust seasoning.

Nopalitos Salad

Ensalada de Nopalitos is an exceptional vegetable dish to accompany a Mexican meal. Nopalitos are pickled cactus pads, tasty and unique. If you cannot find nopalitos, substitute other pickled vegetables.

- 4 large Anaheim chilies, freshly roasted and peeled or canned
- 1 pound cut corn, fresh, frozen or canned
- 1 cup canned nopalitos, rinsed and cut into 1-inch strips
- 2 tomatoes, seeded and chopped or 1 red bell pepper, cubed
- 4 large green onions, cut into 1/2-inch diagonals
- 1/3 cup quality olive oil
- 1/4 cup American light lager
- 1 lime, juiced
- 1 to 2 cloves garlic, mashed
- 1 fresh serrano chile finely chopped
- 1/2 cup cilantro, chopped or 1 1/3 tablespoons dried oregano
- fresh salt and pepper to taste
- 1 avocado thinly sliced for garnish

(1) Pull the chilies into long thin strips. Place the chilies, corn, nopalitos, tomatoes and onions in a large bowl and toss.

(2) In a separate bowl, whisk together the olive oil, beer, lime juice, vinegar, garlic, chili and cilantro.

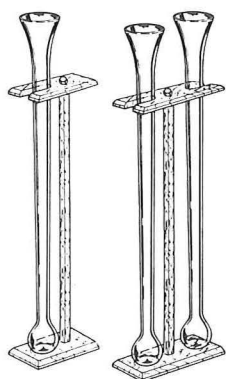
(3) Immediately before serving, pour the dressing over the vegetables, adjust flavor with the salt and pepper and garnish with avocado.

Spanish Rice

Inexpensive, filling and brimming with flavor, this rice is a mainstay of the Southwest. The rice is accented with tomato, onion, beer and spices to create a spicy, light-textured rice that transforms into a hearty meal when vegetables and/or meat are added.

- 1 1/4 cups chicken or beef stock
- 1 1/4 cups Cerveza American light lager
- 2 cups tomato juice or 2 1/2 cups crushed tomatoes with juice
- 1 teaspoon freshly ground pepper
- 1 teaspoon freshly ground coriander seeds (optional)

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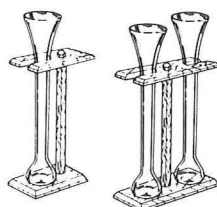
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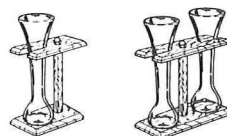


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- 1 teaspoon finely crushed red chilies
- 1/2 cup olive oil
- 1 large onion, coarsely chopped
- 3 cloves garlic, finely chopped or minced
- 2 cups long-grain white rice
- 5 finely chopped green onions
- 2/3 cup cilantro, chopped or 1 1/2 tablespoons dried oregano

(1) Combine the stock, beer, tomato juice, pepper, coriander and red chilies in a bowl and set aside.

(2) Heat 1/4 cup of the olive oil over medium heat and sauté the onions until limp. Add the garlic and sauté until the garlic becomes aromatic. Place the onion and garlic in a heavy dutch oven.

(3) Add the remaining olive oil to the hot pan and, when heated, add the rice. Sauté the rice, stirring constantly, until lightly browned and toasted in color. Add this to the dutch oven.

(4) Pour the tomato juice mixture over the rice and quickly bring to a low boil. Lower the heat and simmer, covered, for 30 minutes.

(5) Remove from the heat and allow to rest five minutes. Stir in the green onions and cilantro immediately before serving. 

Candy Schermerhorn lives in Phoenix, Ariz., and is a culinary consultant and instructor at Kitchen Classics. She 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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Illustration by Amber Sky Illustrators

Good Cider Starts in the Summer

Brewers: Relax and have a cider instead! No need to worry because making cider is simpler than brewing beer (no boiling or cooling), it does not require a fruit press and may be enjoyed sooner than wine. Although homebrewers and microbrewers have rallied around cider as around real ale, many are still unfamiliar with the qualities that make cider such a superb drink.

And what a drink it is! Whether it is a crisp light cider to relieve a parched throat or a glass of New England Barrel Cider with its golden color, fine sparkle and robust flavor or even an oak-aged still cider, rich with layers of flavor that rival the finest white wines for complexity and balance, the fact remains that cider is just too good and just too simple to make to not be part of every homebrewer's cellar.

Much information has been gen-

erated in the past few years to supplement the long and proud history of cider. Anyone can learn to make good cider because of the readily available fresh pressed cider with no preservatives. (While fresh pressed cider is the best choice, pasteurized cider can be used if you are in a jam.) Found at local farm stands and in large supermarkets, this product makes it simple to turn sweet apple cider into hard cider. Character and depth of flavor come with blending. For this you need to know your ingredients. There is no better time to start than during the dog days of summer when apples are ripening in the orchards. And for those who live outside the apple-producing areas, don't worry because you can soon be relaxing and enjoying your own cider as well!

PAUL CORRENTY

Types of Apples

Good cider starts with good apples. Finding a well-run orchard that presses cider in clean surroundings is the most important single element of the process. Country folks know about these places, but if you live in the city take some leisurely drives around the countryside and see what farm stands offer. Check out the premises and the press houses, if possible, to evaluate their general cleanliness and to get a feel for these places. Chances are that if they care about their business they care about their apples.

The next step is to find what apple varieties grow in the area and in the individual orchards. There are four broad categories:

(1) Neutral dessert type. Sweet, low-acid apples that provide plenty of sugar and are slow to oxidize. This group includes most of our common eating and baking apples: Baldwin, Red

Delicious, Cortland, Rome Beauty and York Imperial.

(2) Tart. Medium-acid apples that give zest to the juice: Jonathan, Northern Spy, Rhode Island Greening, Wealthy, Winesap and Granny Smith.

(3) Aromatic. For fragrance and bouquet: Macintosh, Gravenstein, Pinpin, Roxbury Russett and Golden Delicious.

(4) Astringent. In small amounts, crabapple or wild apples will considerably improve an unbalanced cider.

The goal of this search is to find a clean, well-run orchard and/or cider mill that produces sweet cider using different apple varieties (most of them do), or that is open to the idea of doing custom pressing (most of them will). Custom pressing usually involves adding different varieties purchased elsewhere to the crusher along with the varieties grown on the farm to attain a well-balanced blend.

A large commercial press usually extracts a minimum of 30 to 50 gallons per run, so they often divide a single run. The Boston Wort Processors and friends make an annual event out of this by gathering in the hillside or-

chards for an all-day ciderfest that features fantastic ciders from autumn's past served with great grilled food. The day culminates in a visit to the press house to pick up their fresh-pressed cider for next year's batch. What a party!

Juice Composition for Cider

Cider is blended to attain balance between sugars and acids. Too many sweet apples make the cider flabby; too many tart make it sharp. A sweet cider high in sugar must have a sharp framework to support it. But what percentage of which apple types to use? This depends, of course, on what apples are available in a given area, but here are some guidelines:

1. neutral: 30 to 50 percent
2. tart: 20 to 40 percent
3. aromatic: 10 to 20 percent
4. astringent: less than 10 percent

Again quality, availability and balance are the criteria for the final blend. It is not uncommon, however, to find regional specialty ciders that defy the norm. Single-variety ciders from Gravenstein or Baldwin are made

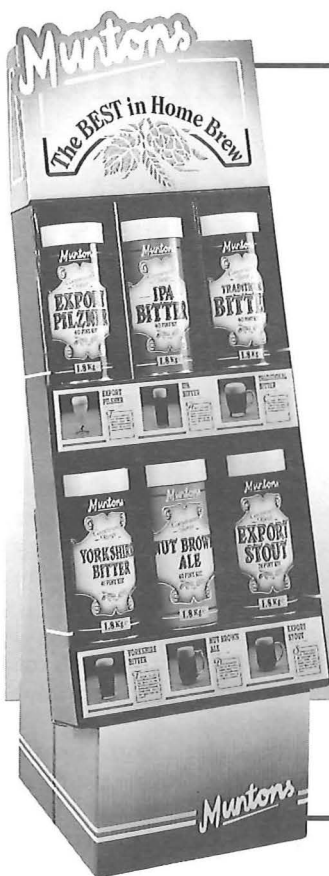
throughout the East while New England-style cider is made with as many as 10 different varieties. In the West the otherwise undistinguished low-acid Delicious is blended with tart Granny Smith or with small quantities of malt extract and offered by a few micro-breweries.

Let's assume that during the late summer or early fall you have found either a source for apples and had them pressed, or have purchased a number of one-gallon jugs of preservative-free fresh sweet cider from a local market. You're now almost ready to go!

Acid, Sugar, Tannin and Yeast

Adjustments to the juice sometimes are necessary to counter the effects of the weather on the crop or to balance a juice too high or too low in acid or sugar content. Measuring sugar content with a hydrometer and acid content with a testing kit are necessary as soon as possible after pressing.

Acid testing kits are widely available and are quick and easy to use. North American apples are usually high enough in malic acid to make



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adjustments unnecessary, but test anyway to verify that the content is around 0.055 to 0.065. (These numbers are listed in acid testing kits.) Be certain to test if using a large quantity of Red Delicious and adjust accordingly, using acid blend. Instructions come packaged with the acid testing kit.

A hydrometer reading will tell what the sugar content of the juice is. Dry, hot seasons concentrate sugars and reduce acids; cool, rainy seasons have the opposite effect. Ten years of readings here in New England put most blends between 1.043 and 1.052, and I suspect that most hydrometer readings will be in that range.

Sugar or sweeteners have been added to cider prior to fermentation for centuries to enhance the must and raise the specific gravity so the finished cider will keep. Low-alcohol cider with starting gravities between 1.048 and 1.070 will have to be either kept cold or pasteurized for storage. Specific gravity readings should be adjusted to between 1.070 and 1.080 (it can be as high as 1.120) using cane or corn sugar, honey or small quantities of brown sugar and molasses.

To increase specific gravity by 0.005 add 2.25 ounces of sugar or 3 ounces of honey per gallon.

Tannin contributes backbone and structure to cider, especially in higher alcohol ciders (above 9 percent alcohol). True cider apples like those grown in England have four to five times the tannin content of North American cultivars (0.05 gr per 100 mL vs. 0.20+ gr per 100 mL). This may be remedied by adding crabapple juice up to 10 percent of the total; by adding a large percentage of thick-skinned apples such as Roxbury Russett or Baldwin up to 30 percent of the total; or by simply adding one teaspoon of tannin powder to five gallons of juice.

The question of which yeast to use always raises eyebrows because of the choices available to the cider maker. Ale and lager yeasts, white wine and Epernay Champagne yeasts, and even wild yeasts (my personal favorite), will successfully turn sweet cider into hard cider and contribute their own flavor profiles to the finished product. These profiles will be discussed in the individual recipes.

Whether it is necessary to sulfite the juice 24 hours before pitching the



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yeast is asked frequently. Commercial yeasts will quickly dominate the wild yeasts teeming in the sweet cider, and even though a few wild ones may survive, the chances of contamination and acetification are very small. Campden tablets minimize the risk of contamination but add the obvious sulfites. The answer is a matter of preference, although almost all cider makers prefer to simply pitch a sufficient amount of yeast into the untreated juice.

Fermentation

The fermentation process for cider is relatively simple. The sweet juice, having been tested for acid and sugar levels, is poured into sanitized carboys, stainless-steel kegs or other non-porous, non-reactive containers. Head space is left so the tannin, acid blend or sugar adjuncts may be poured in and stirred. The yeast is pitched and the vessel is topped off with more cider. A large diameter blowoff tube is attached and the open end is placed in a light sanitizing solution (see New England Barrel Cider recipe for variation).

Primary fermentation lasts three or four weeks and is characterized by lots of foam, small bits of apple and a large amount of CO₂ activity going on inside as the yeast feasts on sugar in the must and the cider cleanses itself.

At the end of a month or so, primary is complete when the fermentation slows to a steady bubbling. Remove the blowoff tube, clean the mouth and neck of the carboy, top up with fresh cider if necessary and attach an airlock. The high acid and high alcohol content (9 to 10 percent) of cider protects it from oxidation. In this regard, making cider is similar to making wine.

Sometime around the end of the year (assuming the cider was purchased in the fall) fermentation will be complete. Move it to a cool or preferably cold location to clarify. This should take a month or so and the cider should be very clear if not brilliant. (The common clarifier in beer and wine making comes from apple skins.)

At this point you may do any of the following:

(1) If the cider is not as clear as

desired, add a clarifier.

(2) If the cider seems too sharp, let it sit on the lees for a month or so to encourage a malo-lactic fermentation to soften the bite.

(3) Rack off directly into bottles or into a clean container and add priming sugar (1 cup per 5 gallon) then bottle for sparkling cider.

(4) Rack off into a clean oak cask or into a clean container with oak chips for finishing.

Don't forget the cider is very drinkable now and will continue to improve with age, something that true cider aficionados check on a regular basis!

Recipes

Much of the information about styles and recipes was culled from the many wild-eyed individuals who arrived at the 1991 AHA Conference in Manchester, N.H., clutching unmarked and odd-sized bottles of cider produced all over the country from different apples, yeasts and fermentation techniques. They answered the call to arms in the battle for recognition and brought the liquid evidence

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needed to awaken the taste buds of the uninitiated.

This awakening led to much discussion concerning the high quality of the various ciders and underscored a very important point: Making cider is more akin to winemaking than to beermaking. The must is high in acid and not nearly as susceptible to contamination as wort. During fermentation and aging, cider, like wine, benefits from a "hands off" approach. Clean equipment, good ingredients and cool temperatures are needed to get the cider off to a healthy start. Patience and Mother Nature take care of the rest. So good luck and appley fermenting!

Still or Sparkling Cider Using Ale or Lager Yeast

- 5 gallons fresh pressed cider or store bought labeled "no preservatives"
- Enough cane or corn sugar to raise specific gravity to 1.060
- 1 teaspoon tannin powder
- 1 packet of dried ale or lager yeast (preferably Whitbread)

This cider is refreshing due to its slightly lower alcohol content, but it

must be cold stabilized. Whitbread yeast is preferred for its buttery overtones and fruity finish. Whether to use ale or lager yeast depends on your cellar temperature. This cider is at its best on draft so rack it off into a keg when fermentation is complete and keep it cold until you have an outdoor party. Attach a CO₂ canister for a refreshing sparkle and you'll be a hit!

Still or Sparkling Cider Using White Wine or Epernay Yeast

- 5 gallons fresh pressed cider or store bought labeled "no preservatives"
- Enough cane or corn sugar to raise specific gravity to 1.070
- 1 teaspoon tannin powder
- 1 pack Vierka (still) or Epernay (sparkling) yeast

This cider is dry with little residual sugar and slightly vinous overtones. The still can be compared to a steely Sauvignon Blanc, the sparkling to a fine brut Champagne. Procedure and fermentation are the same for both. The still cider can be bottled as is or corked; the sparkling cider is primed

(3/4 to 1 cup of sugar per 5 gallons), siphoned into heavy bottles and either crown capped or corked with wired-down champagne corks. Both still and sparkling benefit from a few months of bottle aging.

New England Barrel Cider

- 5 gallons fresh pressed cider or store bought labeled "no preservatives" and non-pasteurized
- Enough cane or corn sugar to raise specific gravity 1.070 and 1.100
- 1 teaspoon tannin powder
- 8 ounces natural unsulfured raisins
- Oak barrel for finishing or sterilized oak chips

The infamous hard cider of the colonies, this is rich in flavor and high in alcohol, long-lived, the *bête noire* of the early Prohibitionists. It is my favorite cider, but care must be taken because it is turned by wild yeasts unique to the orchard in which the apples were grown. These yeasts give a complexity and depth of flavor unmatched by any commercial yeasts. If

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you are unsure about the vigor of these companion yeasts in your juice, go ahead and use a white wine or Champagne yeast instead, but by all means try a 1-gallon experimental jug as well.

During primary fermentation the activity will be very vigorous. When it slows add 8 ounces of unsulfured raisins to the carboy before topping off and attaching an airlock. Raisins add grape tannin and sugar, just the thing to keep the fermentation going during those bitter New England cold snaps.

When fermentation is complete and the cider has cleared, stopper the carboy tightly to age on the lees until maple sugaring season has ended, sometime around early March.

On a clear, cold day, siphon the cider into an oak barrel or a clean carboy with oak chips (à la IPA). Attach a small piece of sterile screening around the siphon tube mouth to prevent raisins from clogging it. Let the cider pick up a hint of the oak but not so much that it dominates. This should take anywhere from five days to a week in a barrel, from one to two weeks with chips.

Finally, rack directly into bottles

for still cider, rack into a container and prime before bottling for sparkling. New England Barrel Cider benefits from aging and will keep for two years if you can hoard it for that long!

Cyser

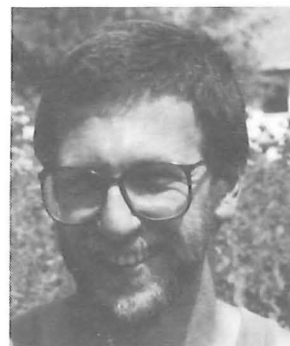
- 5 gallons fresh pressed cider or store bought labeled "no preservatives"
- Enough honey to raise specific gravity to 1.120
- 1 teaspoon tannin powder
- 8 ounces of unsulfured raisins
- white wine or Eperney yeast

Any cider that uses honey as its primary adjunct is considered a cyser; however, this particular version is so sublime and rich that it merits its own recipe. Ferment and follow the procedures for cider using white wine yeast. I first tasted it two years ago and have enjoyed it many times since—hats off to Tom Gorman!

*This article is available in
Library 13-AHA/zymurgy/
Clubs on CompuServe's Beer and
Wine Forum as CDRSUM.92.*

Paul Correnty had his first taste of "cidre bouche" while living in France as a teenager. He emigrated to Massachusetts in 1980 to open a restaurant with his family. Correnty learned old and contemporary cider-making techniques and embarked on a mission to revive cider-making through classes, lectures and autumn Ciderfests held in local orchards. Last year these efforts paid off and cider was introduced as a new category in the AHA National Competition.

Correnty is a professional chef who lives in Pepperell, Mass., with his wife Anita and son Frederick.



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From Carboy to Beer Glass: A Note on Froth

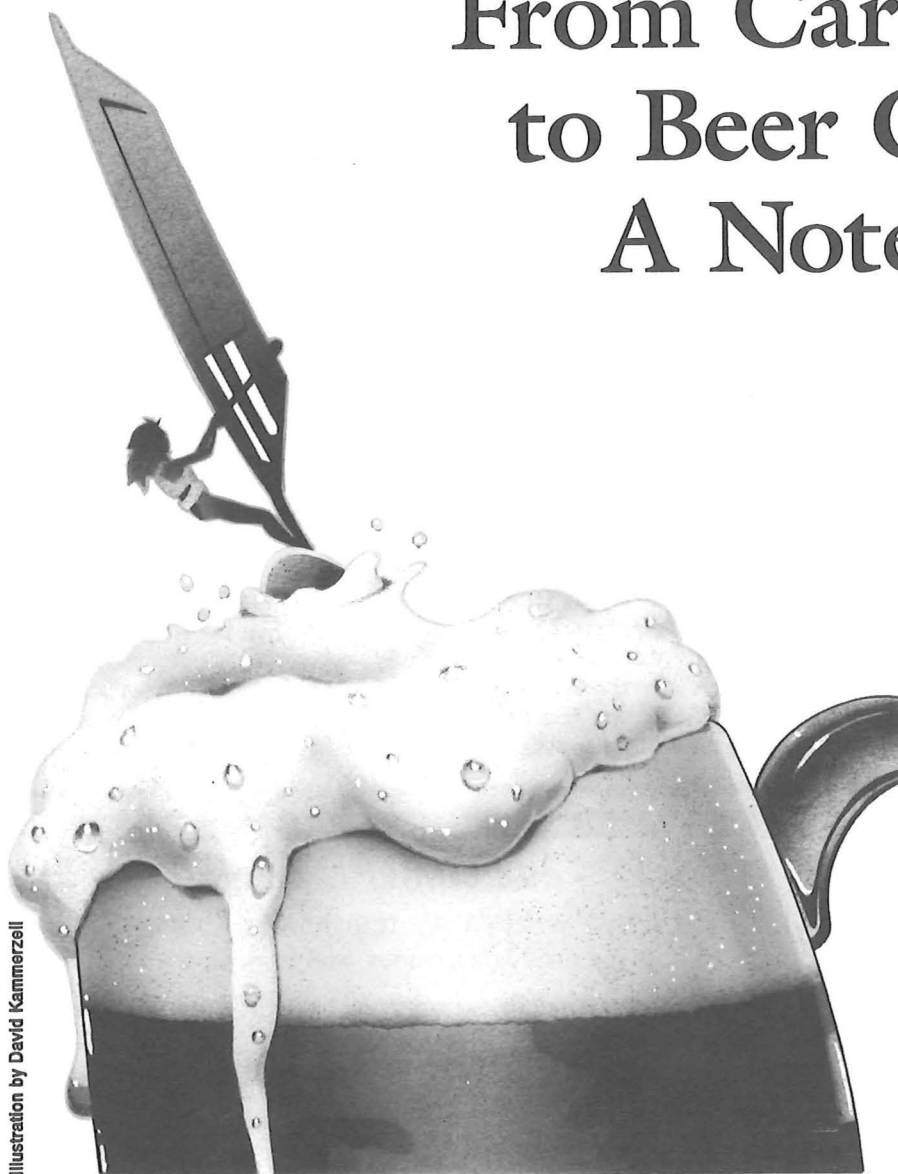


Illustration by David Kammerzell

Go to the refrigerator. Reach in and grab your favorite homebrew. Open it. What happened? If the beer is any good at all, it hissed and popped as the carbon dioxide that built up in the bottle escaped into the atmosphere. This probably is the only time the average beer drinker thinks about CO₂. But as homebrewers, we should realize that CO₂, like alcohol, is a fundamental ingredient of beer and can have an even greater influence on how we judge quality.

Carbon dioxide is a colorless, odorless gas that makes up about 0.2 percent of Earth's atmosphere. Plants absorb CO₂ from the air, and by using light energy incorporate the carbon into their cells, then exhale the remaining O₂. Animals breathe in this oxygen, use it to burn sugars for energy and exhale CO₂ as a waste product. This cycle has kept the balance of oxygen and carbon dioxide in the atmosphere relatively stable.

MICHAEL J. TIERNEY

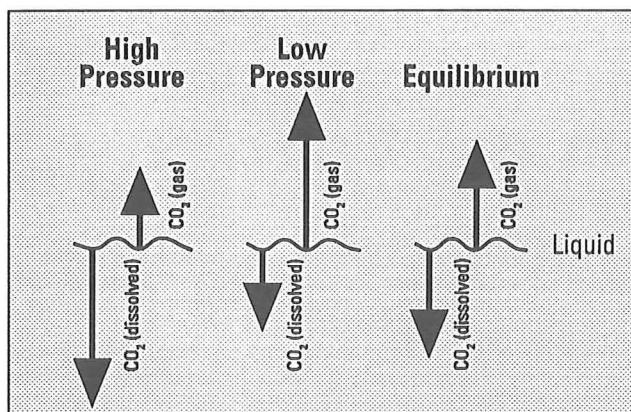
The process of homebrewing is a small part of this cycle, too. Beer yeast (*Saccharomyces cerevisiae*) is a single-celled organism that absorbs oxygen and exhales carbon dioxide. Carbon dioxide in beer is a natural product of fermentation. When we pitch yeast into a solution of sugar and some oxygen (i.e., wort), the yeast goes to work. During the initial aerobic phase of fermentation, the yeast breaks fermentable sugars down into mostly CO₂ and water, along with small amounts of other organic compounds. During this phase, the small packet of yeast pitched into the wort multiplies to a vast seething mass of microorganisms. When the dissolved oxygen in the wort is depleted, the yeastie beasts switch over to anaerobic mode and convert the sugar to alcohol and carbon dioxide as represented by the following formula: $C_6H_{12}O_6 \rightarrow 2CH_3CH_2OH + 2CO_2$.

In homebrewing, most of this CO₂ is vented to the atmosphere through the fermentation lock. (Some large commercial breweries collect CO₂ for recarbonating the beer after pasteurization.) Very little CO₂ remains dissolved in the beer at this point.

The carbon dioxide bubbles floating happily to the surface of the wort also serve an important function in keeping fermentation going strong. Bubbles of CO₂ stir up the yeast as it rises, and keep it suspended in the wort. Suspended yeast can ferment more efficiently than if it were sitting like sludge at the bottom of the carboy. The yeast finally settles out when fermentation stops.

When fermentation is over, a

Figure 1.
The equilibrium between dissolved CO_2 and CO_2 gas. A change in pressure changes the relative amounts of dissolved and gaseous CO_2 .



small amount of sugar is added to the homebrew when the beer is bottled. This sugar is broken down by the small amount of yeast in the bottle, forming more CO_2 . Now that it is sealed in a bottle, the CO_2 can't escape into the atmosphere. Instead, an equilibrium is maintained between the CO_2 dissolved in the beer and the CO_2 gas in the head space of the bottle. As the pressure in the head space increases, the CO_2 dissolves back into the beer which tends to reduce the pressure. High pressure keeps the CO_2 dissolved (Figure 1).

When the bottle is opened, the pressure in the head space drops suddenly as the CO_2 rushes out of the bottle. Thermodynamics demand that two things happen. First, the rapid pressure drop creates a decrease in temperature. The small amount of water vapor in the head space gas condenses into a small cloud in the neck of the bottle. The presence of this swirling cloud is a good indication that your homebrew is properly carbonated. Second, the CO_2 dissolved in the beer will start to come out of solution. Bubbles of gas begin to form on the sides of the

bottle and rise to the top of the beer, and a small amount of foam builds up on the surface.

If all is going well at this point, a small white cloud and a little bit of foam are the only things in the neck of the bottle. However, sometimes a bottle of beer will turn into a gusher and spew out vast amounts of foam like a miniature geyser. Gushing usually is not caused by too much carbonation but by the presence of compounds that stabilize the foam once it has formed. This superstable foam does not subside because its bubbles do not break easily. Abnormal foam stabilizing compounds can result from bacterial infections (insufficient sterilization), or from oxidation (too hot or bright storage). Similar protein-stabilized foams can sometimes be seen along beaches when unusual amounts of microorganisms are present in the water. The waves aerate the water and the resulting bubbles turn to sea foam that remains on the beach when the waves recede.

When the beer is finally poured into a glass, the agitation from pouring drives more CO_2 bubbles out and a thick head of foam should appear on

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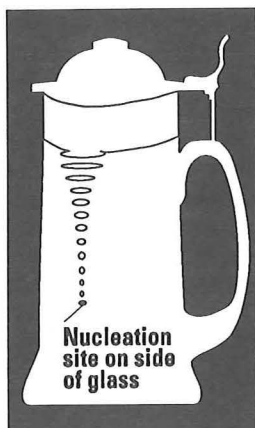
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Figure 2.
The formation of CO₂ bubbles on the side of a glass. Bubbles form at a nucleation site. As they rise to the surface, they accelerate and grow larger. A continuous train of bubbles often forms at the very same nucleation site.



top. A proper head is formed when the bubbles of CO₂ reach the surface coated with compounds that reduce the surface tension of the bubble. Because the surface tension is reduced, the bubble does not break when it reaches the surface, but remains. (Carbonated soft drinks, like colas, don't contain these surface tension reducing compounds. Consequently, their heads are short-lived.) Isohumulones and proteins are the main head stabilizing agents in beer. Isohumulones are one of the bittering components in hops. Most of the protein in beer comes from malt. Wheat malt has large amounts of proteins. As a result, Weizenbier has a pronounced, long-lasting head. When an all-grain brew is mashed at improper temperatures, the protein is broken down, producing beer with poorer heads.

Once the head is formed, CO₂ continues to escape the beer, seeking to maintain an equilibrium between dissolved and gaseous CO₂, but at a much slower rate. Small bubbles form on the sides of the glass and rise up to the surface. An exhaustive article on this process was recently published in the scientific journal *Physics Today* by chemists Neil Shafer and Richard Zare at Stanford University. Professor Zare and his colleague explain the physics and chemistry behind bubble formation and travel in beer. Bubbles start forming at nucleation sites—scratches in the glass, dirt or dust particles, or even yeast bodies, anyplace there is a rough surface where the CO₂ molecules can grab hold and collect.

Often a single nucleation site will continuously produce bubbles, forming a series of bubbles rising to the top (Figure 2). Some people like to enhance this effect by sprinkling salt or

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sugar into their beer. The grains act as extra nucleation sites and a short-lived burst of bubbles appears. The bubble continues to grow until its buoyancy breaks it away from the nucleation site and it floats upward. As the bubble moves up, it is flattened somewhat by the pressure of the water into a somewhat squashed sphere. It continues to collect CO₂ molecules

ture and the rate that CO₂ bubbles are coming out of the beer. If the bubbles are small, the head will be tight-knit and creamy. Guinness, in fact, uses nitrogen instead of CO₂ in their draft stout to make the characteristic creamy head because nitrogen makes smaller bubbles. As the head develops, some of the small bubbles in the foam will coalesce into

*O ales that are creamy like lather!
O beers that are foamy like suds!
O fizz that I love like a father—
O fie on the drinks that are duds!*

—Christopher Morley

from the beer as it rises, and grows on its way to the top to become part of the head.

The consistency and the lifetime of the head is controlled by a number of factors including the amount of carbonation in the beer, the presence and type of foam stabilizers, the tempera-

ture and the rate that CO₂ bubbles are coming out of the beer. If the bubbles are small, the head will be tight-knit and creamy. Guinness, in fact, uses nitrogen instead of CO₂ in their draft stout to make the characteristic creamy head because nitrogen makes smaller bubbles. As the head develops, some of the small bubbles in the foam will coalesce into

larger bubbles. The presence of both large and small bubbles in the head is called marbling, an indication of a stable, naturally formed head. Many commercial beers that are heat-pasteurized and then recarbonated have heads with uniform bubbles.

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for the eyes, but for the nose and palate as well. Carbon dioxide bubbles escaping from an opened beer carry with them the more volatile compounds that form the bouquet. The higher rate of degassing of warmer beer is one reason why an icy chilled beer or an undercarbonated, flat beer has less aroma than a properly carbonated brew served at cellar temperature.

The amount of carbonation also affects how we perceive its flavor. When we take a sip of beer, the CO₂ bubbles out on our tongue because of its rough and warm surface. If the beer is overcarbonated, it will seem like a mouthful of foam. A properly carbonated beer will tingle a little on the tongue, producing what professional food tasters call "mouthfeel." The rapid de-carbonation delivers a quick dose of aromatic compounds to the mouth and nose that contribute to the overall flavor of the beer.

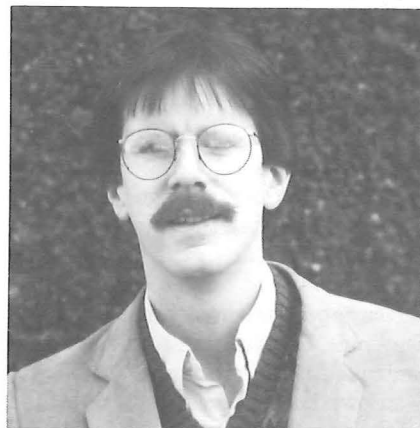
Countless generations of beer drinkers have found fascination in the bubbles rising from beer. Scientists too, in addition to Zare and Shafer, have been inspired. In the 1950s,

Donald Glaser, a young physics professor at the University of Michigan, stopped in at the end of a long day for a beer at the Pretzel Bell, a former campus bar in Ann Arbor. While staring at the bubbles in his beer, he realized that if dust particles could serve as nucleation sites for bubbles, maybe subatomic particles could as well. After several years of experimentation (including some experiments using beer) the bubble chamber was perfected. This instrument uses bubbles formed in a tank of diethyl ether to detect and track subparticles in atom smasher experiments. Bubbles form along the path of the particle making it visible as it moves through the liquid. In 1960, Dr. Glaser (now at the University of California—Berkeley, a town with a large number of brewpubs) won the Nobel Prize in physics for his invention of the bubble chamber.

Not many homebrewers will be awarded a Nobel Prize. Most of our satisfaction of crafting fine beers comes from within. To do this, we need to know how all the components interact to make beer what it is. From the fermentation vessel to the beer

glass, carbon dioxide is a crucial, although often overlooked, ingredient in the production and enjoyment of beer. Proper choice of ingredients and well-controlled brewing techniques are important in producing quality, well-carbonated homebrews that are a pleasure to behold and savor. 

Michael Tierney is a chemist who has been homebrewing for almost 10 years. He likes nothing better than a tall cold glass of foamy Weizenbier.



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Fun With Fruit Beer

~ an essay ~



The first fruit beers surfaced in ancient Egypt, where the addition of grapes to Egyptian "brew" was a common practice. The tradition of adding fruit to beers in England can be traced to the Earl of Treadmill, who called for the addition of certain fruits to all the ales he was served. In this country we can trace fruit beers to Washington and Jefferson, who each consumed more than their share. Then in Italy Pope George Ringo decreed that ...

Ha, I made all that up.

There is little in the history of beer about fruit beers. We do know that certain berries were used in English ales before hops were discovered by the Flemish and legalized in England. Legalization took some time because the church controlled the distribution of hops to households to make their own beer, and we know how finicky the church can be when its monetary stability is threatened. There also is a strawberry beer called "fruitillada" that was made at one time in South America.

The development of fruit beers in the United States is a fairly new one. I know of no commercially available fruit beers before the advent of the brewpub and microbrewery movement in the 1970s. (That isn't to say that there haven't been some, only that I'm not aware of any). But upon further jarring of my brain cells I realized that fruit beers have been around for centuries because both corn and rice are fruits of their plants, whereas barley is a seed. I will no longer discuss these two because I believe they play no part in the beer world as they currently are used. Their sole purpose is to make a lighter product with less flavor.

But what about blue corn? or wild rice? ... NOT!

Adjuncts are anything other than barley, hops, water and yeast. Fruits are adjuncts, and good ones. What fruits are usable or, more appropriately, unusable? I can't say I've had

RUSSELL SCHEHRER

one I wouldn't consider trying if I had all the time in the world. Well, I take that back. I really can't say I would put tomatoes (a fruit) on the "to try" list, although I did taste a drinkable tomato wine once.

Time out here to mention two adjuncts I would seriously question. They are not fruits but more like surf and turf. I recently was sent an oyster stout and my only reaction was, "Please send the oysters separately next time." A true "wing-nut" adjunct I luckily escaped trying was dirt. A local homebrewer decided to include some in his Earth Day salute to our planet. Sorry about the adjunct sidetrack but I just had to let those two out. They do seem a little "fruity," now that I think of it.

Any of the berries make an absolutely wonderful addition to any beer, but then we have peaches, cactus fruit, kiwi, cherries, oranges, etc. The quantities used will vary with the fruit: fewer blackberries will be required than strawberries,

for instance.

There really are no guidelines for quantities because tastes vary. As a starting amount I suggest one to two pounds of fruit per gallon.

The treatment of the fruit is another area that will take some adjustment to personal taste and method of brewing. Try to use only healthy fresh or fresh frozen fruit. If the fruit you get is a little old you can deal with that as well. When I first started making fruit beers I would throw the fruit in at the end of the boil. This is fine, especially for older fruit, but you tend to use more (some of the flavor is lost to the atmosphere through the increased temperature) and the end result has a better chance of being eternally cloudy because the boiling process brings out the pectin.

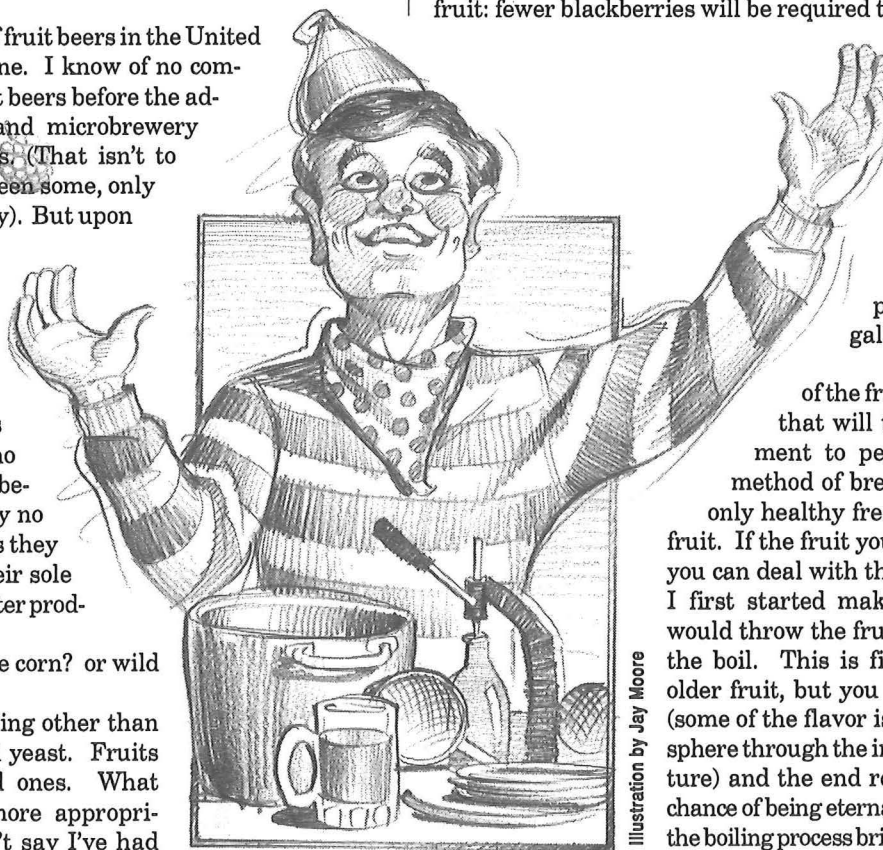


Illustration by Jay Moore

Then I experimented with fermenting the fruit. If the fruit isn't absolutely fresh, then the yeast should be a good strong fermenter, otherwise fresh fruit is essential (one way around this is to use frozen fruit). Use a nylon bag to help retrieve the fruit when you transfer or you will be forever unclogging your siphon or sending a lot of disgusting looking fruit to your next vessel.

An important note: *do not* use a carboy if you are adding fruit to the fermenter! The fruit will usually rise and then you've got problems. I once dry-hopped into a carboy where the volume was higher than I had anticipated. I came home the next day to find plenty of activity but no CO₂ being released. Upon lightly touching the airlock I was greeted by a two-gallon burst of beer to the forehead at about 20 psi. It surprised me, amused my brother and bemused my mother who was still finding bits of hops years later. If it had gone any longer the carboys could have exploded, so use care.

I also add some fruit to the aging process. Fermenting the fruit will allow the yeast to absorb a quantity of fruit flavor. After fermentation your yeast will taste hoppy, fruity and will take on the color of the fruit. This is where fresh fruit is absolutely necessary. Aging on fruit is more advisable for those who keg their beers rather than bottle them. Quite often the aging will lead to a slight surface infection that will be apparent in the bottle. Although it will rarely interfere with the flavor, it will not look good. With kegs the beer is drawn from the bottom so this is left behind and never seen (be sure to clean the keg well before next use—something you should be doing as a rule).

When aging on fruit I again suggest using a nylon bag (pantyhose work well) and lean toward tartness. A sweet fruit will affect the flavor and risk overcarbonation. As a rule fruit beers should be more carbonated than a traditional English ale, so the fruit comes out in the nose along with the CO₂. Some of the sugars in fruit ferment slower, so keep an eye on those bottles after a little aging.

What about fruit juices or extracts? I've not used them because I find the handling of fresh fruit to be an exciting part of making fruit beers and a wonderful excuse to make a pie, even if I don't share it with Charlie Papazian.

Style of beer is yet another area for self-expression. I tend to use a lighter beer so the fruit I spent money or time on can come through to the fullest. People who make fruit stouts amaze me because there is not a lot of room for a fruit to come through in a stout, yet it seems there are a lot of attempts at this one. I suggest using the palest malt or extract available, and then perhaps a little crystal and/or wheat. I once made a fantastic blackberry hefe-weizen.

Hops? Be sure to underhop because you don't want the fruit battling with the hops for attention. I recommend using a mellower hop, all Cascades, for instance, versus a really high-alpha hop (personal preference: I'd rather use more low-alpha hops, I like the way they feel). As a general guideline I suggest cutting back hops by at least one-third.

An ale yeast or a lager yeast? It depends on what is available, what style you're looking for, and most important, how quickly the yeast will kick off. By cutting back on the hops your beer is less acidic and therefore more susceptible to infections.

That reminds me of a funny story about a brewer who claimed to be using a hybrid yeast, an ale and a lager, to get lager characteristics while fermenting at 68 degrees F (20 degrees C). Some people really crack me up (never got the chance to ask him if he used dirt also).

An ale yeast with a light fruit usually lightens up the taste. It will be a little crisper or cleaner tasting. Lager yeasts generally start slower and ferment longer, and you'll be anxious to get some of your product in your (digestive) system. But then, I'm a serious advocate of tasting everything at every step of the game. If it tastes good all the way through you can only imagine how wonderful the final product will be.

Water treatment? Maybe a little gypsum.

A word of caution: like mead, fruit beers have been known to be a bit of an aphrodisiac, but then I've never met a beer that wasn't. Fruit beers tend to have a mellowing effect on one's soul and I've found they are best consumed while doing some serious lounging. A friendly fire comes in handy too. Just remember to relax, enjoy your beer and have fun.

Now on to some recipe guidelines:

Starting gravity: 1.036 to 1.048 (9 to 12 degrees Balling). You want the fruit to come through so keep the alcohol down. A fruit beer should be refreshing with the fruit lending a palate-cleansing feeling.

Final gravity: 1.006 to 1.010 (1.5 to 2.5 degrees Balling). The fruit will help the beer ferment out farther, combined with the lower starting gravity.

Color: light, light, light. Perhaps go to 2 percent crystal, but otherwise start as light as possible and then darken to taste on other batches. You can make a California hoppy amber ale without using fruit so let the fruit come through in flavor and color.

Amounts of fruit: Here are some guidelines. Cherries: one-half to two pounds per gallon. Darker berries such as boysenberry, marion and blackberry: one-half to one pound per gallon. Concentrate on acidic, tart fruits because their flavor will be more evident in the final product.

Good luck and good brewing. ☐

Russell Schehrer's brewing career began in 1981 with a Boulder homebrewing course taught by Charlie Papazian. In 1984 he started winning awards at the AHA competition and in 1985 was Homebrewer of the Year. In 1987 he joined a couple of unemployed geologists to open Colorado's first brewpub, Wynkoop Brewing Co. in Denver. Russ has designed brewpubs in Fort Collins and Vail, Colo., Rapid City, S.D., Lincoln, Neb., and provided training assistance to a microbrewery in Fort Collins. He is an avid motorcyclist in his spare time.





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Brewing with Wild Hops

A

fter a pleasant day's hike in the mountains I was lying under a tree next to a brook, hiding from the hot summer sun and contemplating the cool homebrew waiting for me back home. Examining the tree above me, I noticed a vine with a thick, prickly stem holding hundreds of familiar green flowers. A wild hop plant! I harvested all I could and went home to brew up a batch.

Hops can be found growing wild almost everywhere in America. While it is unclear whether the vine is indigenous, it is known that the first settlers cultivated it on farms all over the East. Hop seeds were first ordered from Britain in 1629. As settlers migrated west, the hop went with them. The shoots were eaten in salads, the fibers used for clothing and the stems woven into baskets.

Wild hops are quite easy to find. Just look around abandoned homesteads, farms, mines or fence lines. Wild hops are even common in city alleys, snaking up trees or light poles. The easiest time to identify the plant is near harvest time in August and September when cones cover the vines, but the leaves are distinctive anytime during late spring or summer.

The only problem with using wild hops in homebrew is their variable quality. A quick check is to rub two mature cones between your palms and sniff. If the

aroma is similar to hops you've used before, they should be usable in your beer. Certain wild specimens may equal store-bought hops in flavor and aroma, while others reek of turpentine, gasoline and even garlic. Male hop plants are worthless for brewing because they produce no lupulin-containing cones. Wild hop stands often contain a few male plants.

Cutting the male plants down prevents pollination, which causes the female flowers to develop seeds. Though seeds are desirable in some hop varieties such as Fuggles or Goldings, they add extra tannins during the boil that can cause clarity problems when brewing lagers. It's best to avoid seeded hops if possible. The male plants are easily identified once they start to flower. Instead of developing pale green cones, they form a line of green spheres that eventually open into small flowers.

Even if you miss cutting the males one year, don't worry—the seeded female hops may still be good for brewing. Harvest your wild hops just like cultivated ones. Pick them just after the pale green petals dry, and don't wait so long that the cones begin to turn brown. Remember to ask permission from the land owner before cutting males or harvesting cones! After harvest, spread the hops on newspapers to air dry slowly, or use a food dehydrator set on low.

Simply smelling the hops after rubbing them in your hands to rupture the lupulin glands will give a general idea of quality. Before taking the chance of ruining a batch of beer with a strange off-flavor, however, it's a good idea to run a hop test. The cheapest, easiest test is to brew two small batches simultaneously, one with wild hops and another with an equal amount of high-quality purchased hops.

DAN FINK

SUMMER 1992 ZYMURGY 39

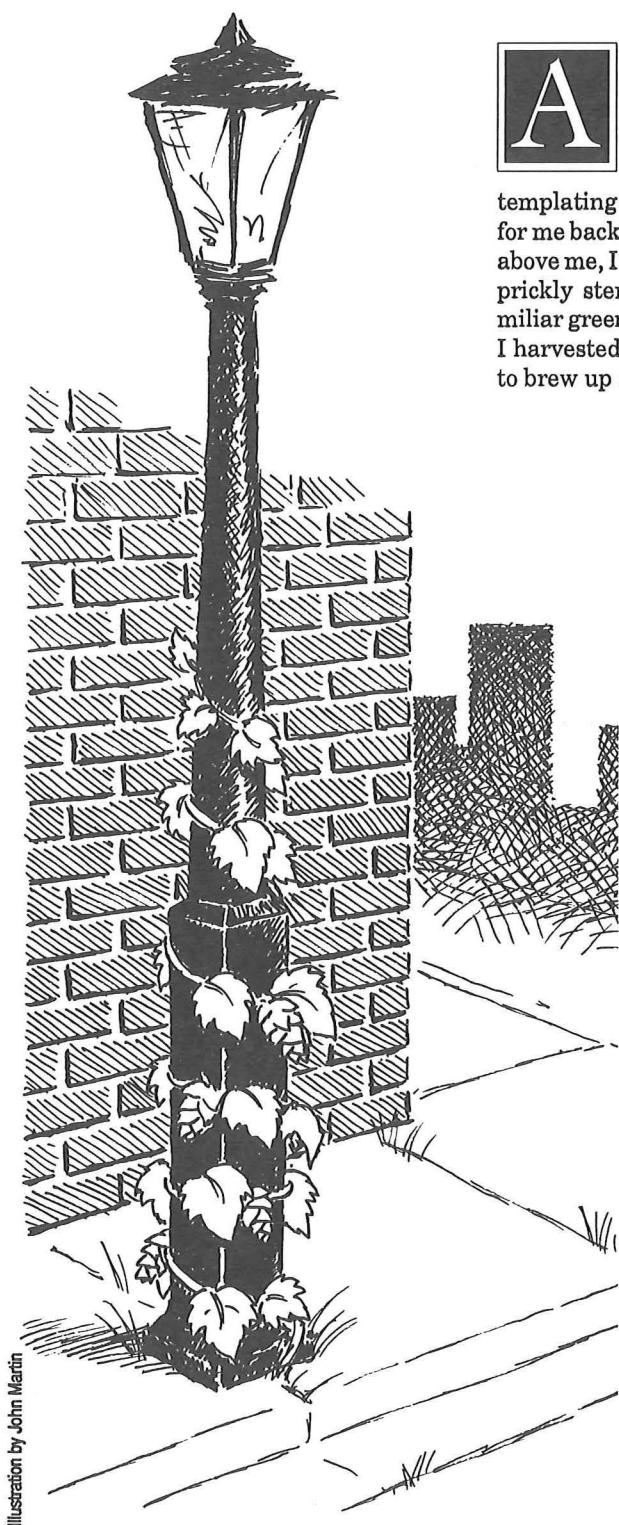


Illustration by John Martin

The only difference between the two batches should be the kind of hop, one wild and one cultivated. Keep the malt, yeast and fermentation temperature the same and brew the batches on your stove at the same time. Weigh out the same amount of hops for both batches. It's best to choose a low-bitterness hop such as Hallertauer for the "control" batch, because most wild hops are very low in alpha acids. Make sure you keep careful records!

Recipe for 1 gallon:

1 pound unhopped light dry

- malt extract
- 1/3 ounce boiling hops, one hour
- 1/4 ounce flavor hops, use same variety as boiling hops, 15 minutes
- 1/4 ounce finishing hops, same variety as above, turn heat off and steep two minutes
- 1 packet ale yeast

Though you can compare your two batches right out of the brewpot, waiting for the fermentation to finish will give you a better idea of how the wild hop beer will taste. It's not necessary

to bottle for the comparison, but if the beers are good, you'll probably want to save some for future consumption. Compare the beers side-by-side, using some bread and water to cleanse your palate between tastes. If your sterilization was good the two brews should be identical, so any differences you taste or smell can be attributed to the hops.

This comparison should give you an idea about the alpha-acid content, but if you have a large quantity and want to know their bittering quality, some labs will test them for you. The Oregon State University agricultural chemistry department will test for alpha and beta acids, cohumulone and water content for about \$25. At least 100 grams of hops are required for the test to be meaningful. For information contact Gail Nickerson, department of agricultural chemistry, Oregon State University, Corvallis, OR 97331-6502.

If your wild hop brew has no serious off-flavors or aromas, you're ready to use them in a full-size batch. You should have a general idea of their alpha-acid content from your testing, so refer to your notes when deciding your hopping rate. Flavor and aroma hops contribute very little bitterness, so let your taste buds guide you in deciding the rate here. As for aroma, it should be similar in beer to when you rubbed those hops between your hands. The usual finishing hop rate is between one-half and two ounces for a five-gallon batch of beer. Prost! 🍻

Dan has been brewing beers and meads for seven years. He is the former news editor of *zymurgy* and is currently planning to open a homebrew supply shop in Boulder, Colo. He specializes in all-grain brewing and kegging techniques.



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APPLES IN BEER



That's exactly how most folks react when we offer up a taste of Sammie Claws Cheer. "Apples in beer? No way!" If you want an alcoholic apple beverage make cider, right? Wrong! The following recipe is for Sammie Claws Cheer, a Christmas ale made with apples, honey, cinnamon and ginger. The blend of spices and apples makes a refreshing and very alcoholic ale. The beer requires at least six months to reach peak flavor, so with only two bottles left we will probably not discover the benefits of further aging. I can tell you that at six months this wonderfully red Christmas ale is one of the best I have ever tasted.

Ingredients for 5 gallons:

- 8 pounds Alexander's Sun Country malt extract
- 2 pounds Colorado clover honey
- 1/2 pound crystal malt
- 1/8 pound black patent malt
- 2 ounces Cascade (leaf hops, 5.9 percent alpha acid)
- 1/2 ounces Saaz (1/2 ounce plug, 3.1 percent alpha acid)
- 3/4 ounces grated ginger root
- 3 teaspoons ground cinnamon
- 9 pounds apples (sliced and quartered)
- 1/4 teaspoon Irish moss
- 2 teaspoons gypsum
- 7 grams Munton and Fison ale yeast started in 300 mL

water at 105 degrees F
(40.5 degrees C)

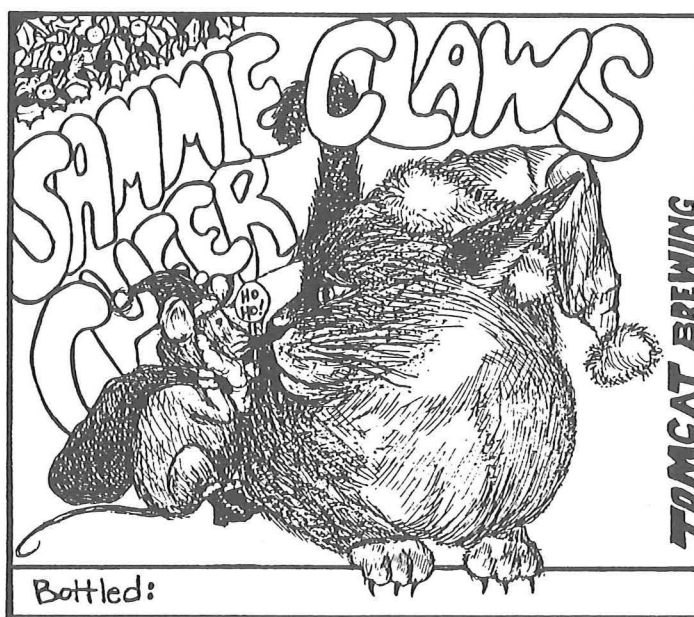
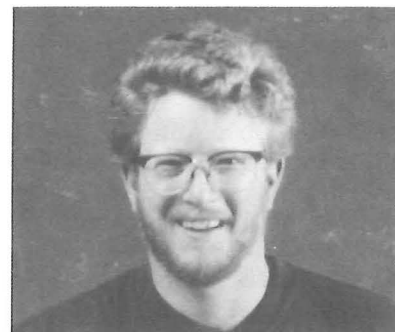
Place grains in 1 gallon of cold water over medium heat; prior to boiling, strain and sparge with 2 to 3

gallons of water at 105 degrees F (40.5 degrees C) for 10 minutes. Strain and sparge with 2 to 3 gallons of water at 105 degrees F (40.5 degrees C) for 10 minutes. Combine water and grains in a 5-gallon pot. Bring to a boil and maintain 150-degree-F (65.5-degree-C) temperature for 20 minutes. Pour mixture into fermenting vessel (remember that the vessel has to hold the wort plus 9 pounds of apples), bring to 5 gallons with sterile water and pitch yeast starter. Allow three to four days for primary fermentation then rack to glass carboy and dry hop with Saaz plug. Secondary

fermentation should be complete within 10 days. Careful aging will greatly enhance the flavor of this ale. When young, the tartness provided by the apples is overwhelming, although when mixed with stout the resulting beverage receives rave reviews. Do not mix too many bottles with stout because the ale provides a real treat after six months in the bottle. The only problem is where to find apples early enough to have this cheery beverage ready by the yule season! ☺

Thom Tomlinson, Ph.D., manages the Great American Beer Festival's Professional Panel Blind Tasting and is president of Boulder County's homebrew club, Hop Barley & The Ale's.

With wife Diane and a Siamese cat named Samantha, he conjures up award-winning stouts. When not involved in brewing he teaches and conducts research in psychology at the University of Colorado.



Label by Thom Tomlinson

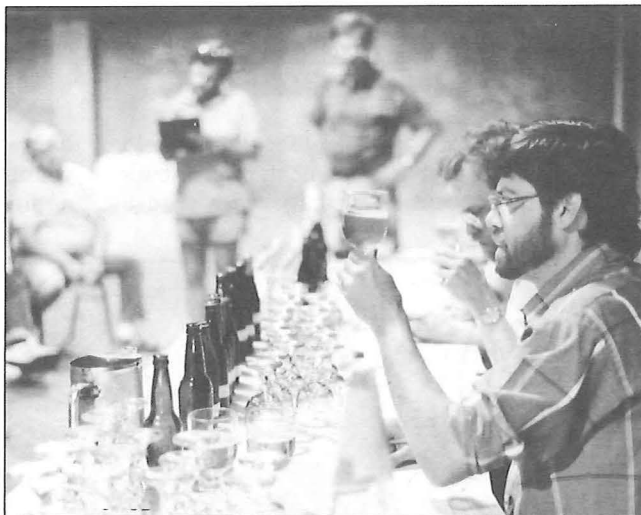
quarts water. Add extract, honey, gypsum and Cascade hops. Boil 60 minutes. After 40 minutes add ginger, cinnamon and Irish moss. At end of boil reduce heat, add apples and maintain 150-degree-F (65.5-degree-C) temperature for 20 minutes. Pour mixture into fermenting vessel (remember that the vessel has to hold the wort plus 9 pounds of apples), bring to 5 gallons with sterile water and pitch yeast starter. Allow three to four days for primary fermentation then rack to glass carboy and dry hop with Saaz plug. Secondary

BY THOM TOMLINSON

SANCTIONED COMPETITION PROGRAM

More Than Ten Years of Homebrew Competition Support

Bottles, bottles everywhere and every drop to drink. Sometimes the scene of a homebrew competition resembles the latter half of an all-out party. Bottles everywhere, bread crumbs all over the table and judges sampling entries to determine the winner. For more than 10 years the American Homebrewers Association has offered assistance to anyone in organizing competitions through the Sanctioned Competition Program (SCP).



nizers get from the AHA is the SCP kit. This packet is a product of more than a decade of annual revision and modification to meet the needs of competitions. Each kit comes with an up-to-date regional list of BJCP certified judges plus helpful hints and suggestions for running competitions based on the experience of organizers in the past. Promotional tips, suggested rules and regulations and suggested categories also are covered.

Steve Dempsey of Fort Collins, Colo., has been involved with the March

Mashfest for the past two years. "Our club has shown a noticeable increase in the quality of homebrew in just the past year. I think the improvement is because of consistent judging," says Dempsey. "Having a list of qualified judges helped me immensely for this year's Mashfest."

Competition organizers of AHA sanctioned competitions are required to fill out an organizer's report form. This form is used by the AHA to evaluate the way competitions are being run and make changes in the program when the need arises. Organizers of annual competitions can obtain the whole history of their competition from the AHA office through past organizers' reports.

The SCP also provides score sheets to all sanctioned competitions. The sheets are constantly being revised and updated to reflect the changing needs of judges and new beer styles. Forms for recipes, judge registration and bottle identification are included. Each judge is given a competition evaluation form that is used by SCP administrators to improve the program.

Competitions are advertised in *zymurgy*, which reaches readers worldwide, and current information is always available between issues of the magazine. The AHA also provides sanctioned competitions two free entries into the National Homebrew, Mead, Cider and Sake Competition.

Persons interested in getting a homebrew competition sanctioned by the AHA can write Karen Barela or James Spence at the American Homebrewers Association, PO Box 1679, Boulder, CO 80306-1679, call (303) 447-0816 or FAX (303) 447-2825. ☐

According to Karen Barela, AHA vice president and SCP administrator, the AHA sanctions competitions to establish standards and procedures that help assure homebrewers their beers are handled and judged in the best possible fashion. These standards and procedures provide results that are accurate, meaningful and educational.

The program has three goals: One is to provide an educational resource for competition staff and entrants. Because the AHA has more than a decade of experience in running competitions, Barela believes the organization is in a good position to offer guidance.

"Someone can use our experience to get a head start on running a first-class beer competition. Our experience tells us it isn't who wins, who judges or who organizes a competition that's important. Rather, the important thing is that everyone has fun and learns something from the competition," says Barela.

Another goal is to bring consistency to homebrew competitions. AHA Sanctioned Competitions are organized with a foundation of guidelines, judges and a standardized scoring system. The system helps ensure homebrewers that their brew will be handled and judged consistently.

An administrative support system for organizing a competition enables organizers to call AHA staff members for assistance if questions or problems arise. This third goal often is useful for first-time organizers.

Most of the participants in the program are from homebrew clubs and homebrew supply shops around the country. Several competitions have been run on an annual basis for several years.

One of the most important pieces of information orga-

JAMES SPENCE / AHA Administrator

FOR THE BEGINNER

RUSTY McCRADY

First Brews That Are Quick and Easy

Let's see—I need to mow the lawn, drive the kids to soccer practice at 11, hit the grocery and hardware stores, pick the kids up from practice at 1, haul that junk from the garage to the dump by 4. Then tomorrow there's the family brunch at noon. . .

Sound familiar? Like most of us, you wait until the weekend to do your brewing, only to discover there's no more time than on your average work day. What's a dedicated (but harried) homebrewer to do?

Relax! The answer is *not* to hurry through the brewing process, but to choose recipes that are relatively quick

and schedule them into your day so you make maximum use of time without feeling rushed.

If you are pressed for time, the first decision you'll be forced to make is to forsake any type of grains—even the relatively quick preprocessed specialty grains such as crystal malt—and go with your favorite extracts, both canned and dried varieties.

Once you've chosen your favorite kit (typically a 3.3-pound can with yeast packet under the plastic lid on top), go ahead and buy a premeasured amount of dried malt extract (available in light, medium or dark) to go with it. If you add this entire amount—usually a three-pound bag—

to the kettle, you'll avoid the messy and time-consuming job of measuring it out by the cupful.

The same principle holds true for your hops. Choose a one-ounce packet of pelleted hops, which are quicker to add and to strain out. If you select a mild, low (3 to 5 percent) alpha acid fresh variety of hops such as Saaz, Tettnanger, Fuggles, Styrian Goldings, Hallertauer, etc., you may feel free to add the entire one-ounce package without fear of overbittering or underhopping your brew.

Let me propose the following quick 'n' easy five-gallon recipe for all of you out there who, like me, have neither unlimited expertise nor time,

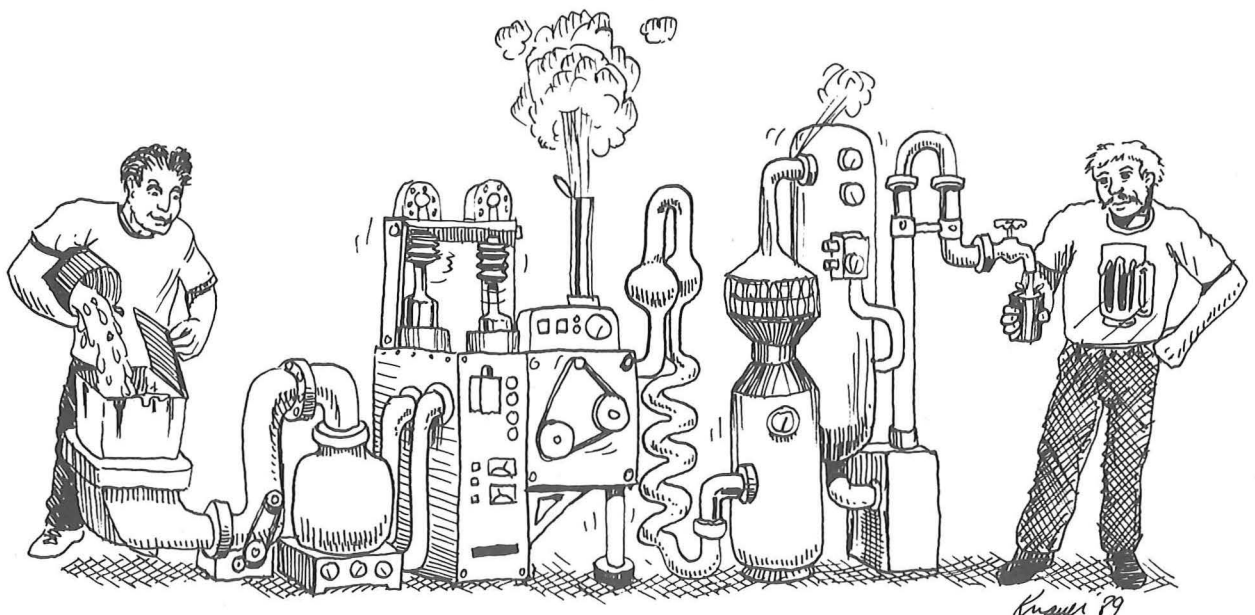


Illustration by Scott Krauer

but are firmly resolved that the main reason for making beer is to exceed the quality and character of the bland stuff you can afford to buy. If you follow the simple procedures outlined here, as well as some further advice below, you'll be making beer that is both quick and excellent.

Make sure you have ready the following equipment:

11- to 20-quart enamel (or stainless steel) brewing kettle, with cover
plastic stirring spoon
plastic fermenting bin, with airlock and tap fitted just above the sediment line (5/8 inch from the bottom)
siphon hose (if you don't have the tap described above)
sanitized Grolsch-type bottles, enough for five gallons (Highly recommended because these will save the time and expense of bottle capping.)

Optional: a second fermenting bin for bulk priming your beer

Assemble the following ingredients:
kit hopped malt extract (include ale yeast*)

3-pound bag of light dried malt extract
1-ounce packet of 3 to 5 percent alpha acid hop pellets
non-iodized salt
water treatment crystals (calcium and magnesium sulfate)
Irish moss

*Ale yeast is provided with nearly all kits. It is faster fermenting and easier to use than lager yeast. It also ferments better at room temperature. Should you desire advice on selecting the best ale yeast, see the article "Analysis and Evaluation of Commercial Brewer's Yeast" in *zymurgy* 1989 "Yeast and Beer" Special Issue (Vol. 12, No. 4).

Procedure

Heat two-thirds kettle of water on the stove. You can add more later, but starting with more than this amount risks a boil over—talk about a time-consuming mess! Immediately add 1/2 teaspoon of non-iodized salt, and 1 or 2 teaspoons of water treatment crystals, depending on the hardness of your water. For the rationale here, see the article on water and minerals in *zymurgy* Winter 1991 (Vol. 14, No. 5).

Right after you begin heating up this water, add the dried malt extract and the canned extract. Make sure you've heated the opened can first to make the syrup runny and facilitate its flow into the kettle. Stir constantly (using the plastic spoon) with one hand as you pour with the other. I turn off the heat for the brief time I am adding the extract so it doesn't burn on the bottom of the kettle.

As you bring this mixture to a boil, you will notice quite a bit of dense foam rising from the surface to the rim of the kettle. Keep lifting the kettle from the burner, using potholders if necessary, and keep breaking this foam barrier with the spoon until the wort (the liquid mixture you've created) can break through from below and thus not boil over.

As soon as you've achieved a stable boil, add one-third of the hops you've purchased. In 10 or 15 minutes, add the next third along with a half teaspoon of Irish moss to aid clarification. After another 15 or 20 minutes, add the final third of the hops, stir them in well and turn off the heat. Your wort is done, except for cooling.

At this point, sophisticated brewers tell you to use a wort chiller to cool the wort rapidly so it can be quickly added to your fermenting bin along with enough water to make 5 gallons. An alternative for those of us without the inclination (or money) to buy a wort chiller is simply to cover the kettle securely, set it in a cool place for three hours and go about your business getting all those other errands out of the way. One major advantage of this approach is that the finishing hops (those added at the end) will have time to imbue your wort with their aromatic qualities, rather than be strained out right away as they would be if the wort were immediately chilled and mixed with water in the fermenter.

I should add that before the wort has finished boiling, I recommend taking a small sampling of it—an ounce or so is plenty—and mix it in a sterilized tea cup with two ounces of cold water. Cover and cool this mixture to around 75 or 80 degrees F (24 or 26.5 degrees C) and add dried yeast to give it a head start so it will enter your wort in an active state and ferment more rapidly and healthily. This is a step you can

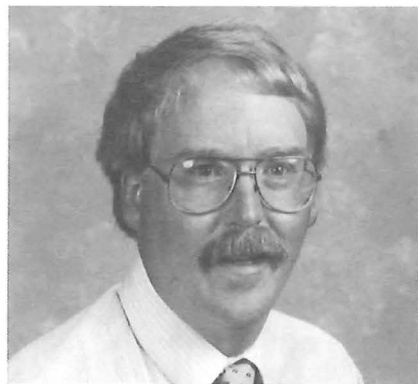
accomplish while the wort is still boiling, so it won't take any more time and may speed things up in the long run by expediting fermentation.

At the end of three or four hours, mix everything—cooled wort, water and yeast—in your fermenting bin, using a strainer to remove spent hops and other "trub" that has settled at the bottom of the kettle.

Guess what? In a week or less at temperatures of 65 to 70 degrees F (18.5 to 21 degrees C), you'll have finished raw beer that needs only to be primed and bottled. Just use the siphon or tap (I find the latter to be much quicker), bulk prime (1/2 cup of corn sugar for the entire batch) or bottle prime (1/2 teaspoon per pint) according to your preference, and your beer is ready for conditioning. I always leave mine in a dark cupboard at room temperature for five days and then store it in the cooler basement for the rest of its existence. It's usually ready to enjoy less than two weeks after bottling.

In about three weeks you've produced first-rate ale start to finish. And your total hands-on time, including cleanup, was approximately four to five hours. Not quite an hour per gallon—and time well spent.

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



Please send questions or topics you'd like to see addressed in this column to Elizabeth Gold, *zymurgy* managing editor.

WINNERS CIRCLE

JAMES SPENCE



Congratulations to Vic Gubinski of the Underground Brewers of Connecticut who took first place in the Hail to Ale Club-only Competition. His recipe for "Skywalker" beat 65 other beers in the Boulder judging. The competition garnered 66 entries—a record for the club competitions. Kevin Johnson of the San Andreas Malts won second place and Dick Van Dyke of the Brewers of South Suburbia took third.

Here's another round of winning homebrew recipes from all over the country. Each won second or third in its category at the 1991 National Competition. Take a close look at "Afterglow," David Sherfey's recipe for chili mead. With very little effort, you can have your own batch of this unique brew. If you've been itching to try something new, any of these recipes should tickle your fancy.

Correction

Spring 1992 (Vol. 15, No. 1) "Winners Circle" has an error. The correct quantities of malt in the Classic Pilsener recipe should be 20 pounds of Klages malt, 1 pound of Munich No. 10 malt, 1 pound of Vienna malt and 1 pound CaraPils malt.

PORTER

Robust Porter
Third Place
Patrick O'Hara
Bedford, Ohio

Ingredients for 5 gallons

- 5 pounds two-row Pale malt
- 4 pounds Klages malt
- 1 1/2 pounds Vienna malt
- 1 pound crystal malt
- 1 1/5 pounds chocolate malt
- 1/2 pound CaraPils malt
- 1/4 ounce Northern Brewer hops, 6.5 percent alpha acid (60 minutes)
- 1/4 ounce Perle hops, 7.2 percent alpha acid (60 minutes)
- 1 ounce Chinook hops, 13.5 percent alpha acid (30 minutes)
- 3/4 ounce Cascade hops, 4.5 percent alpha acid (30 minutes)
- 1 ounce Cascade hops, 4.5 percent alpha acid



Illustrations by Bunk Hess

(two minutes)

No. 1028 ale yeast

1 teaspoon nutrient

3/5 cup corn sugar to prime

- Original specific gravity: 1.054
- Terminal specific gravity: 1.025
- Boiling time: 60 minutes
- Primary fermentation: 21 days at 62 degrees F (17 degrees C) in glass
- Age when judged (since bottling): three months

Brewer's specifics

Mashed all grains for one hour at 154 degrees F (68 degrees C).

Judges' comments

Very good conditioning. Fine, full body. Good mouthfeel. Too roasted a taste for porter. More a stout but generally a good beer.

Good appearance. Some burnt malt, very nice hop bitterness. Balance is nice. Could use more malt in aftertaste.

Dry, powdery black malt flavor. Some astringency. Very good body.

Nice robust porter. Needs more hop bitterness and aroma. Seems at low end of robust porter range.

SPECIALTY BEER

Second Place
Scott Graysmith
Denver, Colorado
"Steamin' Honey Wheat Lager"

Ingredients for 5 gallons

- 4 pounds English lager malt
- 2 pounds wheat malt
- 3 3/10 pounds Munton & Fison wheat malt extract
- 1 1/2 pounds honey (boil 30 minutes)
- 2 whole cloves (primary)
- 1 1/2 ounces Hallertauer hops, 4.25 percent alpha acid (75 minutes)
- 1/2 ounce Saaz hops, 3.03 percent alpha acid (40 minutes)
- 1/2 ounce Saaz hops, 3.03 percent alpha acid (20 minutes)
- 1/2 ounce Hallertauer hops, 4.25 percent alpha acid (five minutes)
- 1/2 ounce Saaz hops, 3.03 percent alpha acid (five minutes)



2 packages No. 2007 liquid lager yeast
 2 packages Bavarian wheat at bottling
 1/2 cup honey to prime

- Original specific gravity: 1.052
- Terminal specific gravity: 1.010
- Boiling time: 75 minutes
- Primary fermentation: seven days at 65 degrees F (18 degrees C) in glass
- Secondary fermentation: 17 days at 65 degrees F (18 degrees C) in glass
- Age when judged (since bottling): two months

Brewer's specifics

Mashed all grains at 104 degrees F (40 degrees C) for 50 minutes, 122 degrees F (50 degrees C) for 45 minutes, 143 degrees F (62 degrees C) for 45 minutes, 155 degrees F (68 degrees C) for 35 minutes, 170 degrees F (76 degrees C) to end mash.

Judges' comments

Well-made beer. Clean and malty. Clove subtle and honey nonexistent. Otherwise a great beer.

Nice drinkable beer. Nice balance. Cloves finish nicely. Could use a touch more honey. I like this combination of honey and cloves.

Cloves don't come through like I would have expected from the nose. Slightly tart finish. Clean beer, I wish the cloves had come through.

Honey character comes through in flavor. Condition is OK but quickly falls flat by swallow. Cloves in taste not discernible. Lovely beer, nicely balanced.

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FLAVORED MEAD

Second Place
David Sherfey
La Crescenta, California
"Afterglow"



Ingredients for 1 gallon

- 3 4/5 pounds clover honey
- 4 1/2 grams yeast nutrient
- 5 grams Red Star Prisse de Mousse yeast
- 1/16 teaspoon sodium metabisulfite
- 1 Pasilla chili
- 1 New Mexico chili
- 1 California chili
- 1 tiny round "hot mama" chile

- Original specific gravity: 1.130
- Terminal specific gravity: 1.032

Brewer's specifics

Mix honey with 1 quart of 80-degree-F (27-degree-C) water. Mix yeast nutrient and sodium metabisulfite in 1/2 cup water. Pour all ingredients into 1 gallon fermenter and top off with water to 1 gallon. Let stand for two days then pitch yeast. When fermentation stops, rack off the yeast. Chop and deseed the chilies and "dry hop" to taste in a sterile straining bag.

Judges' comments

Wonderful! Nice blend of chilies and just right in volume.

Good. Not too hot. No off-flavors, not too fiery.

Both the honey and chilies come through. Very finely crafted mead, balancing all the flavors. Very nice. Would be great with food!

TRADITIONAL MEAD

Sparkling Mead
Third Place
Philip Fleming
Broomfield, Colorado
"Oh Honey, Let It Be Mead!"



Ingredients for 5 gallons

- 12 pounds Madhava honey
- 1/2 teaspoon gypsum
- 5 teaspoons acid blend
- 1 teaspoon Irish moss
- Lalvin EC-1118 Prisse de Mousse liquid culture
- 5 teaspoons yeast nutrient
- 1 cup corn sugar to prime

- Original specific gravity: 1.074
- Terminal specific gravity: 1.003

- Boiling time: 30 minutes
- Primary fermentation: 21 days at 67 degrees F (19.5 degrees C) in glass
- Secondary fermentation: 35 days at 65 degrees F (18.5 degrees C) in glass
- Age when judged (since bottling): 16 months

Judges' comments

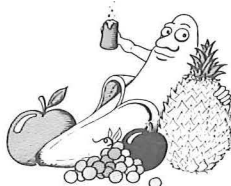
Honey flavor not intense, relatively dry, slightly sharp. Body a little thin but not unusual for sparkling mead. Finish fades. Could use a little more honey flavor and less acidity. Appearance very good.

Excellent balance. Very clean and well conditioned. Leaves a nice warming sensation making you want to have another sip.

Excellent. Clean with just a hint of hotness on the tongue. Good carbonation. Balanced. Could have slightly more body.

FRUIT BEER

Second Place
Stephen Goetz
Horsham, Pennsylvania
"No. 14"



Ingredients for 6 gallons

- 3 3/10 pounds John Bull dark malt extract
- 3 3/10 pounds Munton & Fison hopped light malt extract
- 3 pounds Munton & Fison dry dark malt extract
- 1 1/2 pounds crystal malt
- 1 pound chocolate malt
- 4 1/2 pounds frozen raspberries
- 2/3 ounce Tettnanger hops (60 minutes)
- 2/3 ounce Tettnanger hops (30 minutes)
- 2/3 ounce Tettnanger hops (20 minutes)
- 4 cups corn sugar boiled with wort
- 2 packages Edme ale yeast

- Original specific gravity: unknown
- Terminal specific gravity: 1.016 at 74 degrees F (23.5 degrees C)
- Boiling time: 60 minutes
- Primary fermentation: five days at 72 degrees F (22.5 degrees C) in glass
- Secondary fermentation: 14 days at 72 degrees F (22.5 degrees C) in glass
- Age when judged (since bottling): 11 months

Brewer's specifics

All grains steeped until boil.

Judges' comments

Nice, chewy brew. Full palate really holds up to raspberries. Somewhat puckery tartness to finish is difficult to avoid with this fruit. Nice effort with a difficult fruit. If you used raspberries in the kettle, try using them in secondary instead to reduce tartness.

A nicely balanced brew. Tartness of raspberries with a good balance of roasted barley and hops.

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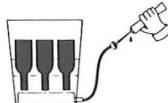
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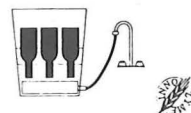
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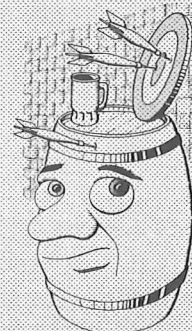
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India Pale Ale
Vic Gubinski
Fairfield, Connecticut
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of Connecticut
"Skywalker"



Ingredients for 5 gallons

- 3 3/10 pounds Munton & Fison light malt
extract syrup
- 1 1/2 pounds Munton & Fison dry amber
malt extract
- 3 pounds pale malt
- 1 pound crystal malt
- 1/2 ounce chocolate malt
- 2 3/4 ounces Northern Brewer hops
(60 minutes)
- 1 ounce Cascade hops (finish)
- 1/2 ounce Cascade hops (dry)
- 2 teaspoons calcium carbonate
- Wyeast American Ale No. 1056
- 4 ounces corn sugar to prime

- Original specific gravity: 1.050
- Terminal specific gravity: 1.012
- Boiling time: 60 minutes
- Primary fermentation: 14 days at 68 degrees
F (20 degrees C) in glass
- Secondary fermentation: 14 days at 68
degrees F (20 degrees C) in glass
- Age when judged (since bottling):
eight months

Brewer's specifics

Mashed all grains with 5.33 quarts water at
140 degrees F (60 degrees C). Raised to 150
degrees F (65.5 degrees C) for 70 minutes. Raised
to 168 degrees F (76.5 degrees C) for five minutes.
Sparged with 2.5 gallons 168 degree F (76.5 de-
grees C) water.

Judges' comments

Good color, clear, full head of tiny bubbles.
Very bitter, clean, alcohol on low end for style.
Could use more hop bitterness.

Good appearance. Not enough hop bitterness
for an IPA, would make a good classic English
pale ale. Good body and appearance.

BROWN ALE

American Brown
Second Place
Kenneth Cummings
Asheville, North Carolina
"No. 69 Brown Ale"



Ingredients for 5 gallons

- 6 1/4 pounds Klages two-row malt
- 1 3/4 pounds crystal malt (60° Lovibond)
- 1 1/4 pounds dextrin six-row malt
- 1/4 pound chocolate two-row malt
- 2/3 ounce Northern Brewer hops, 6.7 percent alpha acid (60 minutes)
- 1/2 ounce Cascade hops, 5.4 percent alpha acid (60 minutes)
- 1/4 ounce Northern Brewer hops, 6.7 percent alpha acid (10 minutes)
- 1/4 ounce Cascade hops, 5.4 percent alpha acid (10 minutes)
- 1/6 ounce Northern Brewer hops, 6.7 percent alpha acid (1 minute)
- 1/6 ounce Cascade hops, 5.4 percent alpha acid (1 minute)
- 1/3 ounce Cascade hops, 5.4 percent alpha acid (dry)
- 1/2 teaspoon gypsum
- 1/4 teaspoon salt

M.e.V. No. 87 English Ale yeast
1/4 teaspoon corn sugar per bottle to prime

- Original specific gravity: 1.045
- Terminal specific gravity: 1.011
- Boiling time: 60 minutes
- Primary fermentation: nine days at 62 degrees F (17 degrees C) in glass
- Secondary fermentation: 18 days at 62 degrees F (17 degrees C) in glass
- Age when judged (since bottling): three months

Brewer's specifics

Mashed all grains for 40 minutes at 112 degrees F (44.5 degrees C). Raised to 132 degrees F (55.5 degrees C) for 30 minutes. Raised again to 154 degrees F (68 degrees C) for 90 minutes. Sparged with 5 gallons 168 degree F (75.5 degrees C) water. Finish hops steeped for 10 minutes before cooling.

Judges' comments

Light on malt. Soft but plentiful hops. Good balance. Tiny (but good) DMS aftertaste.

Light tan head. Very clear dark mahogany color, good head, fair retention. Nice hoppy dark brew with well-balanced malt. Good brew. Great hop treatment.

Great balance with good hop character. Slightly dry finish. Very tasty, good mouth feel. Very smooth and satisfying. Excellent effort. Solid representation of style.

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CHARLIE PAPAIZIAN

Gnarly Roots Lambic-style Barley Wine Ale

A fest beer, a porter, a pils, a stout? Nah. Let's try something really different. Really unique. Having already done the experimentation, I can tell you it worked. A strong, 10-percent copper-colored ale with enough of a wild, fruity and sour quirkiness to enhance the pleasure of an already wonderfully complex barley wine ale.

Using my barley wine ale recipe template, I introduced active cultures of *Brettanomyces bruxellensis* and *Brettanomyces lambicus* one week after the initial cultured yeast was pitched.

The result is not your typical strongly soured Belgian lambic. Rather, the Belgian lambic character is obvious, but gentle. I suspect that because of the high-alcohol content and the vigorous start of the cultured yeast, the *Brettanomyces* cultures were somewhat inhibited.

This high gravity barley wine is strongly hopped, but because of the high alcohol and relatively high terminal gravity, the bitterness is nicely balanced with the sweetness of the malt and further triangulated with the fruity acidity of the lambic-type yeast byproducts.

Let it age. Let it age. Let it age. Lagering at 60 to 70 degrees F (15.5 to 21 degrees C) cellar temperatures is just dandy for this brew. But because of the time it should lager in the fermenter, it is best to rack the brew into a secondary closed fermenter. The second fermenter is preferably glass, so you can observe the disconcerting scum that forms on the surface of the beer as a result of the action of the *Brettanomyces* yeasts.

These yeasts are wild and tend to

break down and ferment some of the normally unfermentable carbohydrates. Be patient. I waited eight months to bottle my Gnarly Roots. And it tasted so-o-o-o incredibly good when I bottled it, I couldn't wait for it to carbonate.

In order to minimize the possibility of worrying, I added about 8 ounces of freshly fermenting wort when I bottled and reduced the priming sugar to 2/3 cups corn sugar. After eight months in fermentative lagering I observed the great clarity of the brew and wondered about the activeness of the yeast.

Because this is a long-lagered and well-aged brew, it is of utmost importance to reduce the risk of oxidation. When racking the brew from primary to secondary or secondary to the bottling carboy it helps to purge the air out of the receiving carboys with carbon dioxide. This can be accomplished with a 10- or 15-second shot of carbon dioxide from your CO₂ tapping system, or add a couple of gum-ball-size pieces of dry ice to the receiving carboy. Finally, be careful not to aerate or splash the beer when bottling. The use of oxygen absorbing barrier caps should greatly enhance the life of this beer. This is a batch for putting up in lots of small bottles.

So let's cut

the shuck and jive and get on with the recipe.

Recipe for 6 1/2 gallons

- 4 pounds pale malt
- 1 pound crystal malt
- 15 pounds dried light malt extract
- 60 Homebrew Bitterness Units for the boil (I used 5 ounces Eroica hops)
- 1 1/2 ounces Willamette hops for flavor
- 1 ounce Cascade hops for aroma
- 1 ounce Mt. Hood hops for aroma
- 2 packets (14 grams) ale yeast or healthy liquid culture cultures of *Brettanomyces lambicus* and *Brettanomyces bruxellensis*
- 2/3 cup corn sugar for bottling fresh yeast when bottling
- Original gravity: 1.100
- Terminal gravity: 1.026 to 1.032

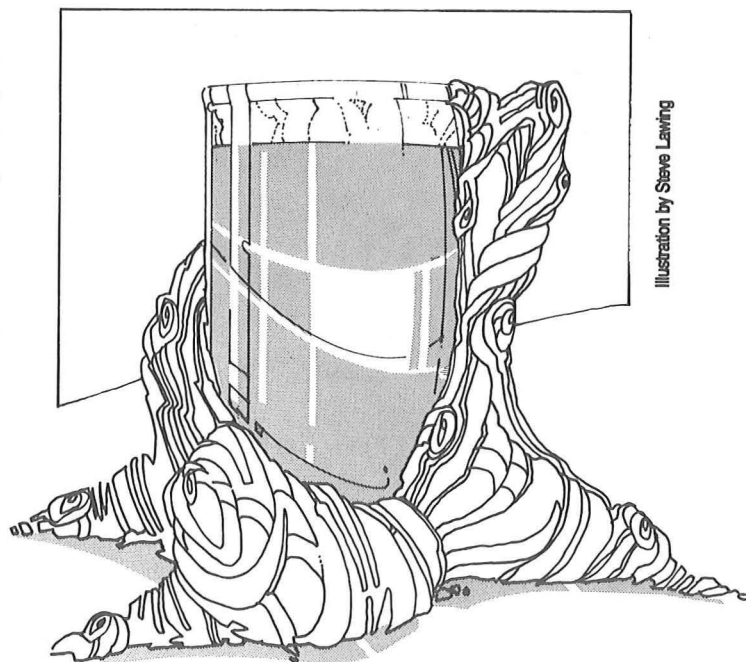


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Step infusion mash the grains by first adding 5 quarts of 130-degree-F (54.5-degrees-C) water to the crushed grains. Hold the approximately 122-degree-F (50-degrees-C) mash for 30 minutes. Add 2 1/2 quarts of boiling water to the mash to raise the temperature to about 158 degrees F (70 degrees C). Hold for 30 minutes. Strain and sparge with 2 gallons of 170 degree-F-(76.5-degrees-C) water.

To this sweet liquor add the malt extract and boiling hops and boil for 60 minutes. Then add the flavor hops and continue to boil for 20 more minutes. Turn off heat. Add aroma hops.

Transfer the hot hopped holy wort to a clean fermenter to which 2 gallons of cold water have been added. Sparge and complete transfer. Add the ale yeast when about 70 degrees F (21 degrees C).

Ferment for one week then add the *Brettanomyces* yeast cultures. Ferment in primary for about one month. Then transfer to a secondary and allow to ferment until there is no activity and the beer has become crystal clear. This should take at least five months.

Bottle the beer with some fresh yeast and priming sugar. Don't worry about the scum. It will remain behind and not form in the bottles.

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DEAR PROFESSOR

PROFESSOR SURFEIT

Moldy Oldies?

Dear Professor,

I recently brewed a batch of wheat beer (all-grain recipe) but I neglected to start my liquid yeast culture, so after brewing and cooling the wort I transferred the goodies to a seven-gallon carboy, attached an airlock and waited for the yeast to grow. The packet of yeast never took, so I bought another and started it. This time I was successful.

It took a week from the time the wort was in the carboy until I could pitch the good yeast and, lo and behold, I spotted a small batch of mold floating in the wort.

I pitched the yeast anyway, just to see what would happen. Either the carboy was not sanitized, or contact with air in the carboy for a week caused the contamination. I know I failed in several steps to provide the best environment for the wort, but my question is: If the mold is aerobic, will the yeast's activity displace enough of the oxygen in the carboy with carbon dioxide to provide an anaerobic environment that would kill the mold?

Sincerely,
David W. Wilhelms
Aberdeen, Wash.

Dear David,

Ah, to answer your question: If the mold is anaerobic, would the yeast's activity displace enough of the oxygen in the carboy with carbon dioxide to provide an anaerobic environment that would kill the mold?

What is most likely to happen is that, yes, oxygen will be displaced, but the mold won't be killed, it would be inhibited or go dormant. Mold spores activate with the least amount of oxygen that can be introduced, like when bottling.

I've had specks of green-white powdery mold in carboys that were half full after being racked, or in a carboy with a fermentation lock gone dry. The test is what it does to the taste. Taste the beer. If there is no evidence of a moldy taste,



then proceed, being careful to introduce as little air as possible into the process. Usually, the alcohol content inhibits most mold from really going "beerserk." Also, the low pH (higher acidity) of fermented beer inhibits mold activity.

Fuzzy wuzzy was a beer,
The Professor, Hb.D.

Carcinogenic Root Beer or B.S.?

Dear Professor,

In the *zymurgy* Summer 1990 (Vol. 13, No. 3) you suggested using sassafras root to make root beer. Sassafras contains safrole, a carcinogen, and may even be illegal as a food additive.

On an unrelated matter, I have been storing a yeast nutrient mixture, which includes amylase enzyme, in plastic sandwich bags. The mixture has now eaten holes in two plastic bags over the course of several months. Although the sandwich bag box doesn't say so, I suspect the plastic is biodegradable. I believe that at least some plastic is made biodegradable by including starch molecules. If so, it seems that the amylase is breaking down the starch. If not, I'm heading for the patent office.

Sincerely,
J. Samuel Listiak
Houston, Texas

Dear J. Sam,

I noted from your chart, Risk of

Getting Cancer (relative to drinking tap water) from the source: Richard Wilson, "Analyzing the Daily Risks of Life," *Technology Review*, February 1979, p. 45, that one is 200 times more likely to get cancer from drinking natural root beer with sassafras in it than drinking water. I also noted that eating one raw mushroom caused a risk factor of 100, cola 1,000, diet cola (saccharin) 60, and beer (alcohol) 2,800. So someone in the meantime banned safrole (derived from sassafras).

Perhaps presented in a respectable and logical manner, sassafras is dangerous. But I can add 2 + 2 and, from the "facts" presented in this chart, you aren't making a believer out of me. But there must be other factors with regard to sassafras, aren't there?

With regard to your beerodegradable plastic bags, let me know what the patent office says.

Give me some facts, not B.S.,
The Professor, Hb.D.

Ginseng Beer

Dear Professor,

After a three-year break I have recently re-entered the hobby-science of homebrewing.

Do you know where I may find a recipe for ginseng beer, or if there is a book titled *The Brewers Herbal* and where it might be obtained?

Your help is greatly appreciated.

Sincerely,
Sam Shaw
Memphis, Tenn.

Dear Sam,

Seems logical to me. Why not figure out how much ginseng you need to make a tea. Taste it and, if needed, dilute it to the amount of flavor you want in your beer. That's the amount to add to your brew. I'd suggest steeping the ginseng in the beer during the final 10 minutes of the boil. Or do like I've seen in some oriental shops—add a slice into each bottle as you bottle.

Long and good life,
The Professor, Hb.D.

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Precipitroiska

Dear Professor,

Is this a job for the CIA or the AOB? Despite the fall of the Berlin Wall, I have reason to believe that we are in for a new kind of Cold War.

Late last December, as most of the nation was in the grips of a Siberian deep-freeze, I spied a strange occurrence. A variety of recently purchased bottles of beer were carefully placed in my garage to make room in the refrigerator for the holiday meals. As the temperature plummeted, the beers were subjected to an unduly harsh cold. Miraculously, none of the bottles cracked or exploded, but two of them showed signs of liquid leaking past the caps due to the Eastern bloc nations. Moscovia Beer from the Moscow Brewery in the Soviet Union and Red Star Beer from the Berliner Brewery in East Berlin stood alone among the 12 or so beers left in the garage that day. I did notice upon purchasing these particular products that they were hazy with particulate matter in suspension.

Have I unwittingly stumbled on a

Communist plot or would a centrifuge eliminate this subterfuge?

Agent 170, a.k.a. Marty Nachel
Frankfort, Illinois

Dear Agent 170,

Sounds like you've been the victim of a spy-counterspy fake drop. That is not Siberian snow in those bottles, but precipitate from old beer. Now that the wall is down, I wonder if they are cleaning out their cellars and exporting that "age-old" import taste to us capitalist Americans. Actually because of the pressures generated by freezing, even our own homebrew could spring a leak.

Strange thing about freezing weather and beer. I've had beers and meads exposed to minus 30 degrees F that survived this exposure over the winter. If the beer is not disturbed, crystallization may not occur. What you have is a supercooled liquid that could freeze almost instantaneously if jarred.

The centrifuge won't take out stuff that is in solution to begin with. Sorry, but you got some aged beer.

*Your Comrade,
The Professor, Hb.D.*

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Alcoholic Non-alcoholic Beer

Dear Professor,

Appearing in the marketplace of late is a plethora of so-called non-alcoholic brews, e.g., O'Doul's (Anheuser-Busch), Sharp's (Miller), etc. Though the labels on these products boldly state that the contents are non-alcoholic, a closer reading of the small print denotes that they do, indeed, contain upwards of 0.5 percent alcohol. The discrepancy prompts the following questions:

(1) Why the advertising deception? (2) Is the technology unavailable to brew a zero-alcohol "beer" (not to be confused with the sugary "malt beverages" on the market)? (3) Can 0.5 percent alcohol in a 12-ounce bottle be quantified in more explicit terms? One brewer claims that some fruit juices and soft drinks contain similar amounts of alcohol!

I look forward to your reply. Thank you.

Most sincerely,
Norman Meyerson
Miami, Florida

Dear Norm,

How anyone can call a non-alcoholic brew a "beer" in the first place is beyond my logic. It ain't beer if it doesn't have alcohol. But it can taste like it. Ersatz brew?

To address your concerns, I'd have to say that it isn't the brewers' fault what they can or cannot call their concoction. The government regulates this and says that "non-alcoholic" means less than 0.5 percent, which is very little and, yes, sometimes unpasteurized apple juice has that much alcohol. For crying out loud, even your own body produces a certain amount of alcohol. The paranoia about these small amounts of alcohol is against the notion of being a living organism ourselves.

"No alcohol" means just that—"zero" alcohol. The knowledge exists to make a no-alcohol drink, but it would not be brewed, rather it would be made from unnatural-to-beer ingredients and kept in a sterile environment to prevent any degree of fermentation. It is hardly worth the effort since the stuff would probably not taste like "beer" anyway.

INFORMATION FROM THE ASSOCIATION OF BREWERS!

The Association of Brewers is a non-profit educational association dedicated to promoting the appreciation of beer and brewing. In addition to publishing books and magazines, we also make available the following free information. If you are not familiar with our organization, please send for our catalog and consider joining the American Homebrewers Association, a division of the Association of Brewers. Please circle only the items you want.

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- 942 How to Teach a Homebrew Class
- 943 How to Start a Homebrew Club
- 945 How to Brew Your First Batch of Beer
- 946 Outline for Intermediate Brewing
- 947 How to Use Specialty Malts, with Malt Extract Conversions
- 948 The zymurgist's Guide to Hops
- BGP Beginners Package

Lists

- 937 Additives Allowed in Beers Commercially Brewed in the U.S.
- 939 Homebrew Clubs in Canada, New Zealand, Australia and the U.S.
- 940 Beer-Related Magazines, Newspapers, Journals, Newsletters

General Information

- 931 An Introduction to the American Homebrewers Association
- 932 *zymurgy* Mini-Index 1978-1991
- 933 *The New Brewer* magazine Index 1983-1991
- 934 The Beer Enthusiast Catalog
- 935 Introductory CompuServe Information Service kit (members only)
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percent of the contents, by weight, can
be alcohol.*

*Yours with a bit of alcohol
in my barleywine,
The Professor, Hb.D.*

Love a Bond

Dear Professor,

I enjoy reading *zymurgy* very
much and have a suggestion: A lot of
articles talk about the beer color ex-
pressed in "degrees-lovibond." I don't
know what one degree lovibond looks
like. So, could you please use the
front cover of *zymurgy* to print a
lovibond color chart?

Keep on the good work.

*Jacques Bourdouxhe
St. Laurent, Canada*

Dear Jacques,

*We thought of doing just that years
ago, but then when we consulted with
experts they advised us that we would
be misleading people to think they
could use a printed color to compare to
beer color.*

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*You see (I see too), beer color is
transparent and depends on the vol-
ume of beer you are looking through.
Have you ever siphoned a stout? It
looks light brown, doesn't it? Put it in
a glass and all of a sudden it's quite a
bit darker.*

*The best way to get a feel for beer
color is to notice the colors of beers
with known lovibond colors (now called
SRM rather than lovibond). Michelob
dark is a 17; Michelob light is about a
2.5 to 3, for example.*

*There's an excellent article in the
zymurgy Fall 1988 (Vol. 11, No. 3) by
George Fix on beer color and how to
calculate it. Based on his data, clubs
or individuals could easily make
sample beers representing different
color ranges.*

*Oars de wuvre,
The Professor, Hb.D.*

Bag the Muslin

Dear Professor,

I've been addicted to brewing beer
for just less than a year now and have
read anything I can get my hands on
about brewing. Sometimes informa-
tion from one source conflicts with
information from another. Answer
me this: What is "protein scrub," and
how does it work? I commonly use
both whole and pellet hops, but in
either case, place them loosely in mus-
lin bags when adding them to my wort.
Does this diminish the effect that a
strong rolling boil has on the hops,
especially whole hops?

Respectfully,
James S. Roberts
Anchorage, Alaska

Dear James,

*Protein scrub? Sounds like a
bathing abrasive to me. I've never
heard of the term. Perhaps you mean
protein trub?*

*Yes, you are correct in assuming
that placing your hops in a muslin
bag reduces the efficiency of a good
rolling boil. I'd recommend bagging
the muslin and just go naked with the
hops in the boiling wort. Get a good
strainer. Relax and have a homebrew.*

*Scrub a flub,
The Professor, Hb.D.*

THE BEST FROM KITS

KURT DENKE



One of the greatest things about beer is its complexity, yet complexity can be intimidating and present an obstacle to the enjoyment of brewing. How we enjoy brewing can depend in part on the relationship we develop with that complexity.

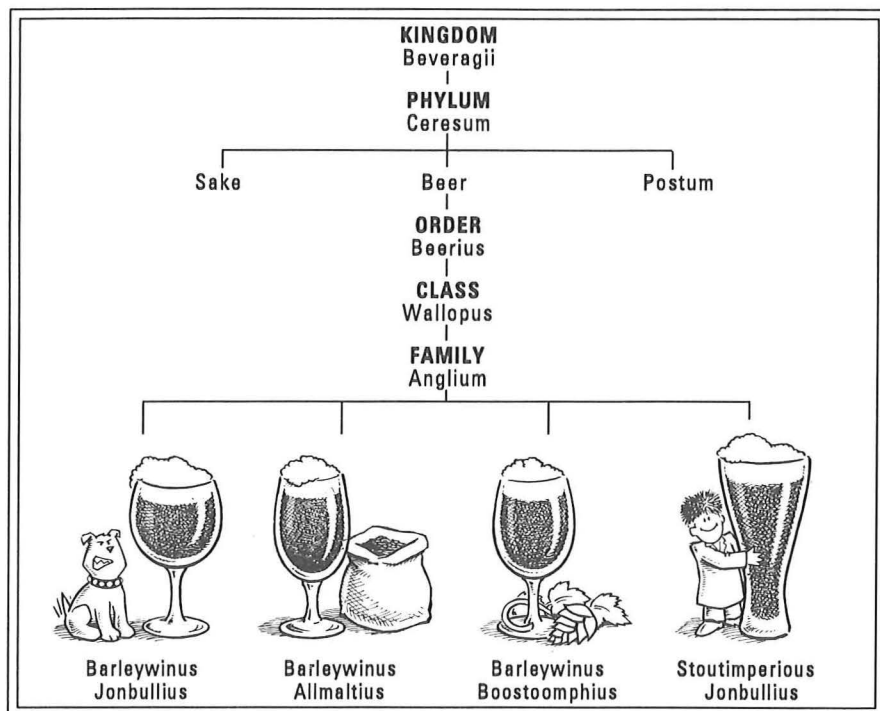
Complexity can be organized and explained. One of the greatest organizers of ideas the world has ever seen was an 18th-century Swedish scientist named Carl von Linne, or as most know him, Linnaeus.

In Linnaeus' time some biologists still believed in spontaneous generation (as in "cheese turns into mice") and the field of geology was dominated by catastrophists who believed the world was 6,000 years old. The life sciences needed considerable groundwork, and Linnaeus undertook one of the most daunting jobs imaginable: classifying and cataloging every living thing.

Linnaeus must have known the task would not be finished in his lifetime; indeed, it will never be finished. In any event, he created a system of nomenclature for classifying things that remains with us today, known in his honor as the Linnaean system. It organizes all living things into a tree of nested categories called kingdoms, phyla, classes, orders, families, genera and species. Even if you've never heard of Linnaeus, you're familiar with his system; without him we would not be *Homo sapiens*.

In retrospect, one of the fascinating things about the system is that simply by grouping things it highlighted a hidden order that foreshadowed the most revolutionary idea of the next century: the interrelatedness of all life through the process of evolution and natural selection.

Nice, but what does it have to do with brewing? Well, as I said, there are people who have a problematic relationship with the complexity of beer. There are so many possible ingredients, so many different proportions in which they can be combined, so many



ways to prepare them so many procedures for fermenting and packaging them and so many "styles" of beer that some react to the whole mess by freezing up in fear.

With so many variables, there are a zillion places to screw up and ruin something; accordingly, some people will never brew a batch except to someone else's recipe. They'll follow instructions from books, magazines and even (gasp!) those little pamphlets that come with a can of malt extract, but never dare to play around, make something up and see what happens.

There is, of course, no need for this sort of fear. Although it may sometimes seem as though the science of brewing consists of a huge, unknowable mass of unorganized information, underneath lies an elegant, simple order. Moreover, as with living things, all beers are related. This is important because it means that even when we make mistakes in fiddling with a recipe, the worst that normally happens is that we come out with a perfectly drinkable beer that happens to

deviate from what we had in mind. The beer simply resembles another glorious style of beer. Examples abound; my friends have won high awards in beer competitions simply by reclassifying their "failures" to match the way the beer turned out.

The best way to appreciate the underlying simplicity of brewing is to let your senses be your guide. While it is important to read, it also is important to put down the books now and then and learn with your nose and your taste buds—chew a bit of that grain, rub those hops between your hands and take a whiff. Like it? Add more to your beer! There certainly can be more to the process, but this is fundamentally what it's all about. To derive the best—your best—from kits, there's nothing more worthwhile than becoming familiar with your ingredients and doing a bit of fiddling here and there to learn how those ingredients make beer taste.

When we modify a recipe to boost particular flavors, we can expect a fairly predictable change directly related to

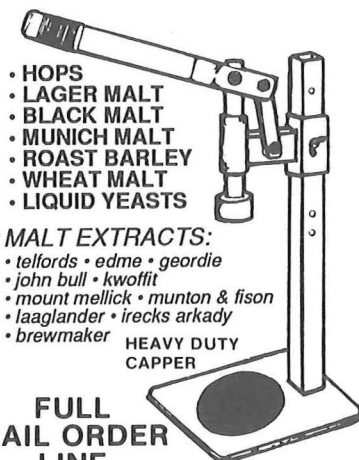
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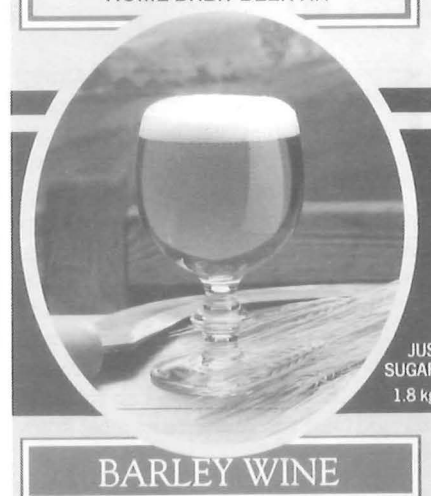
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the modifications we make. In other words, this is a process not of random mutation, but of controlled mutation; we don't have to worry about creating something unbeerlike. It's like being a mad scientist formulating your own monster in Dr. Frankenstein's lab. Remember: this is your monster, and what's important is that you (and perhaps your brewing partner, Igor) enjoy yourself and make the beer you dream about. Ignore the villagers.

Using a standard kit, the John Bull Premium Barleywine kit, I produced a series of "controlled mutations." Because Linnaeus' system depicts the relationships among things rather aptly, I decided to give each of these beers a Linnaean-style name. He did not categorize beer, but if he had it might have gone something like this: Beers are members of the Beverage kingdom, Beveragii; Phylum Ceresum consisting of the grain-based beverages such as beer, sake and Postum; Order Beerius consisting of barley-malt-based hopped beverages. The John Bull Premium Barleywine kit would be ideal for making beers falling in the class Wallop consisting

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BARLEY WINE

of strong beers, family Anglium consisting of beers of English origin. The original kit, of course, is Barleywinus Jonbullius and the others are related to it in varying degrees.

Barleywinus Jonbullius

This beer was made by following the recipe in the kit instructions. It was hard to force myself to not boil the wort, and when it was done my dog growled at it.

Ingredients for 4 gallons:

- 1 can (4 pounds) John Bull Premium Barleywine kit
- 2.2 pounds (1 kg sugar) ale yeast
- 1/2 teaspoon sugar per bottle for priming
- est. OG: 1.061
- FG: 1.013

Boil 1/2 gallon of water, add the extract and sugar, stir to mix then and top up with cold water and pitch the yeast. Very simple but too simple in my opinion; I recommend boiling the wort and not using all this sugar.

The finished beer had a deep reddish color and a pleasant fruity aroma. It was quite dry and light-bodied for a barley wine, but had a healthy dose of bitterness and a good bit of malty flavor. It was not, as conventional wisdom would suggest, particularly tart or cidery despite the heavy use of sugar. This is really a very nice, well-designed

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Barleywinus Allmaltius

This beer is my idea of a simple modification to a no-boil, add-sugar recipe that brings the malt content up to 100 percent, sterilizes the wort and introduces aroma hopping.

Ingredients for 4 gallons:

- 2 cans (8 pounds) John Bull Premium Barleywine kit
- 2 ounces Fuggle hops
- ale yeast
- 3/8 cup dry malt extract (for priming)
- est. OG: 1.075
- FG: 1.032

Boil the full volume of the wort for 10 minutes, add the Fuggles during the last minute, then force-cool the wort and pitch the yeast.

This beer had a dark red to light brown color that was a shade dark for a barley wine. It was medium-bodied for the style, with just a bit of residual sweetness followed by a pleasantly strong, lingering bitterness. The hop aroma was quite evident and made a substantial contribution to the complexity of the beer. As much as I liked the kit in its "standard" formulation, I liked this one better.

Barleywinus Boostoomphius

Exercising my usual reckless abandon, I decided the gravity on the first two batches was a shade on the low side for a barley wine. Furthermore, because I usually find English barley wines a bit underhopped, I gave the beer a boost in bitterness, adding more malt for the former and more hops for the latter.

Ingredients for 4 gallons:

- 2 cans (8 pounds) John Bull Premium Barleywine kit
- 2 pounds light unhopped dry malt extract
- 4 ounces Tettnanger hops
- 2 ounces Fuggle hops
- ale yeast
- 3/8 cup dry malt extract (for priming)
- est. OG: 1.093
- FG: 1.038

Boil the full volume of the wort for

10 minutes, add the Tettnanger hops at the beginning of the boil and the Fuggle at the end of the boil, then force-cool the wort and pitch the yeast.

The finished beer was in most respects similar to Barleywinus Allmaltius. However, the added dry malt made a dramatic difference in the body; this beer was very thick and perhaps a shade syrupy, with a strong residual sweetness. Of these formulations this came closest to the commercial English barley wines I have sampled.


Stoutimperial Jonbullius

I love Courage's Imperial Russian Stout; every time I go to England I come back with bottles and bottles of the 1985 vintage in my luggage. It's a shame no major kit manufacturer produces a kit for a Russian imperial stout, however, that can't stop a homebrewer, can it? Beer taxonomists may argue as to whether imperial stout should be separated from barley wine at the genus or species level; I chose the former.

Ingredients for 4 gallons:

- 2 cans (8 pounds) John Bull Premium Barleywine kit
- 1 pound black patent malt
- 1 pound crystal malt
- 4 ounces Fuggle hops
- 3 ounces Tettnanger hops
- ale yeast
- 3/8 cup dry malt extract (for priming)
- est. OG: 1.083
- FG: 1.041

As you can see, just a couple of tweaks to the recipe can produce a rather dramatically different beer. Crush the black and crystal malts and steep them in a gallon of water at approximately 150 degrees F (65.55 degrees C) for 30 minutes. Strain off and discard the solids and mix the steeping-water with the extract. Bring the volume up to batch size and boil for 20 minutes. Add 2 ounces of Fuggle and 3 ounces of Tettnanger at the beginning of the boil and the remaining 2 ounces of Fuggle at the end of the boil. Force-cool the wort and pitch the yeast.

The finished beer was black and opaque with a prominent roasty-hoppy aroma. The body was very thick and the flavor presented a very pleasant, intense bitter and roasted flavor. Yum, yum. Igor and I like this one. 

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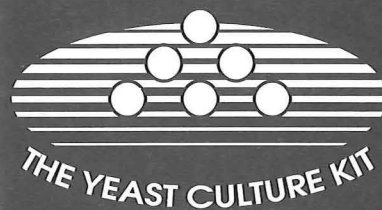
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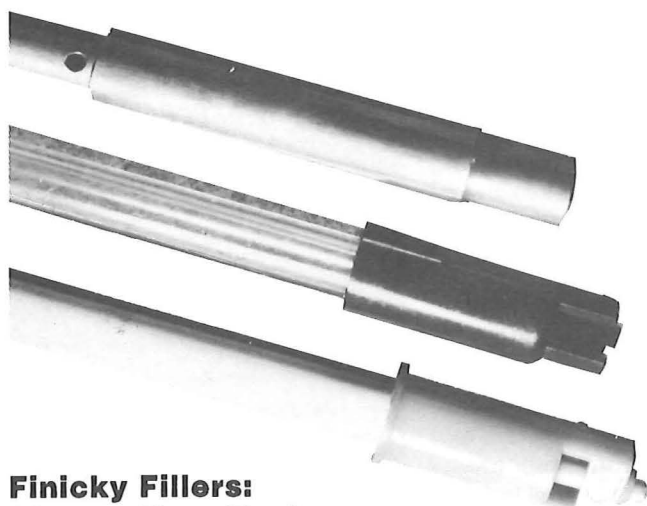


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REVIEWS



Finicky Fillers: Choose Your Tool

Every brewer has had to wrestle with a bottle filler at one time or another. The gadgets certainly beat pinching off the tubing by hand while fumbling around with bottles and a capper—or do they? Many competition judges will attest to how many oxidized beers with low bottle fill levels are entered. Often these problems stem directly from the bottle filler itself. I've tested three fillers for this review: the venerable white-and-orange model available everywhere and two newcomers intended to prevent oxidation problems and speed the bottling process. Both the new models are available from *zymurgy* advertisers. All were tested with a standard 750 mL Champagne bottle. The liquid level in the carboy I bottled from was topped up after each test.

The Old Standby

This filler is a fixture in nearly every homebrew supply shop. It has a white plastic tube with an orange spring-loaded tip. When you push the tip on the bottom of the bottle, beer flows. When you stop pushing, the flow stops. It sounds simple enough, but there are many annoying problems with this filler.

When you start filling, the orange tip sprays the beer into the bottle until the tip is partly covered with beer. With a Champagne bottle like many brewers use, this takes quite a bit of liquid, as the punt rises almost two inches off the bottle bottom. This produces a danger of oxidized flavors in the finished brew. It's also very slow—it took 42 seconds to fill a Champagne bottle.

This filler displaces 2 1/2 inches of beer in a Champagne bottle, far too much head space—one to 1 1/2 inches is more appropriate to prevent oxidation during aging. Topping up by hand will lessen head space, but also promotes oxidation and contamination.

Champagne bottles with a big punt are difficult to fill with this model because of the spring pressure and small

valve tip—you must try to hold the tip on the curve of the punt because the tip is too short to open the valve when pressed in the bottom of a punted bottle. In addition, when the tip is removed for cleaning, the spring is loose and often slips down the drain.

The Fermtech Filler

This model, made in Canada, is constructed of clear acrylic plastic with a gray plastic tip. The tip does not detach for cleaning, which could become a problem after months of use. In practice, I had no difficulty scrubbing the tip out with an airlock brush. There is no spring in this model—gravity pressure holds the valve closed until the filler tip touches the bottom of the bottle.

The Fermtech model still sprays beer out the bottom. The problem is not as bad as in the orange-and-white filler, but the danger still exists. This model will fill Champagne bottles from the bottom with no trouble, as the valve stem is long and touchy. This helps reduce oxidation danger, but the first quarter inch of beer still sprays out.

This filler displaces 2 1/4 inches of beer in a Champagne bottle. While better than the spring-tip filler, it's still too much. Also, it's hard to bottle alone with this model because the weight of the filler itself is enough to activate the valve. If you set the filler down in a clean bottle while you run to get a homebrew or answer the phone, the beer will keep flowing.

The Fermtech was the fastest model tested, filling a Champagne bottle in only 25 seconds.

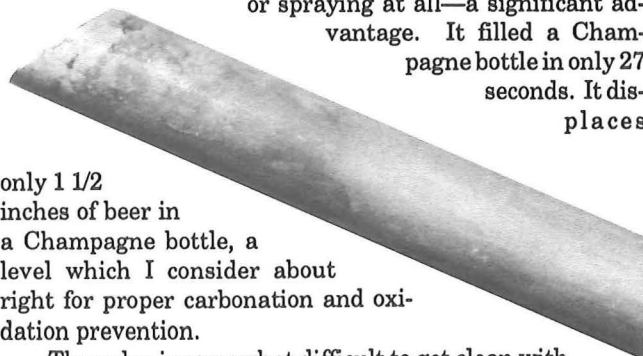
Phil's Philler

Phil's Philler, made by the Listermann Manufacturing Co., is a new twist in fillers. Machined out of brass, the valve is at the top of the stem. The bottom of the tube is cut at a 45-degree angle. There is no spring; the valve opens and closes by human power. The filler comes in a short model for standard 12-ounce bottles and a long model for wine and Champagne bottles.

This model fills bottles with no splashing or spraying at all—a significant advantage. It filled a Champagne bottle in only 27 seconds. It displaces

only 1 1/2 inches of beer in a Champagne bottle, a level which I consider about right for proper carbonation and oxidation prevention.

The valve is somewhat difficult to get clean with a brush, which must be done before sanitizing in bleach



solution. Instead, I'd recommend simply boiling the whole thing in water. I use that method on Tygon racking hose and metal valves with great success. It eliminates rinsing and the danger of getting chlorine residue in your beer.

The only problem with Phil's Philler is that it takes a bit of practice to operate. Putting the valve above the stem prevents splashing and displacement problems, but it means there's a slight delay from when you close the valve to when the beer stops flowing. With the short filler you get an extra one-fourth inch of beer in the bottle after you close the valve, and with the long model it's one-half inch.

Also, if you close the valve before a bottle is full and then start again, you'll push an air bubble through the beer in the bottle. It's best to practice until you can fill smoothly and in one motion. Phil's Philler has no trouble with big-punted Champagne bottles because of its top valve.

It sometimes takes practice to shut off Phil's Philler at the right time. The stem in the short model doesn't weigh enough to pull the valve shut when you lift the filler to stop the flow. The long model shuts off by its own weight part of the time. It's a simple matter, though, to hold the stem down with your little finger as you pull up on the valve, but practice before you try it with beer or mead! The long filler was easier to close, as I described, and will work fine on small bottles. It's the one to purchase if you use a mix of different size bottles. A couple of California clubs that tried the device suggested adding a stainless-steel sleeve around the stem to give it enough weight to shut off in one-handed use. That would certainly work, but it would slightly increase the amount of beer displaced.

Conclusion

Both Phil's Philler and the Fermtech filler are significant improvements over the annoying, orange-tipped standard model. The Fermtech's disadvantage is some splashing and fairly large displacement. Phil's Philler's disadvantage is the practice it takes to use it effectively without making a mess.

I prefer Phil's Philler over the other two because preventing oxidation in my homebrew is far more important than a few minutes spent practicing with a new gadget. It filled bottles quickly and gently with no splashing and left an acceptable head space with no topping up.

—Dan Fink

Sweet & Hard Cider: Making It, Using It & Enjoying It

A better title would have been "Cider for the Serious," because the practical advice begins in the book's *second* paragraph. "Hello. Don't use windfalls." It's eight pages before the authors even take a breath, and by then you do know how to make cider. The next 180 pages teach you everything else, including how to plant and care for an orchard.

You are in the hands of cider virtuosos, authors who seem to know everything. You want nuts and bolts? The recipe for French Cider begins, "Whitewash the walls with a solution made up with 10 kilograms of quicklime and one kilogram of copper sulfate."

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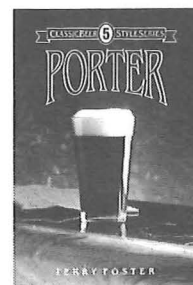


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Sweet & Hard Cider is at once an introduction and an advanced guide. There are generous margins for notes and a good index. Short of a volume that comes with its own apples, I can't imagine a better book.

Sweet & Hard Cider: Making It, Using It & Enjoying It by Annie Proulx and Lew Nichols (Garden Way Publishing; \$11.95).

—Kihm Winship

Homebrew With Charlie Papazian

Homebrew With Charlie Papazian is a 79-minute VHS videotape that leads the beginner through a kit beer then proceeds step by step through the entire homebrewing procedure, including such vital topics as sanitation, aeration of the wort, measuring specific gravity, pitching yeast, racking and bottling. Along the way we meet homebrewers and professional brewers and learn whence malt and hops come. Homebrewers tell how they were tugged to the hobby and

convey some of the magic of homebrew that grips so many.

The presentation is clear and concise, carefully delivered so that the viewer doesn't become lost, yet there is little sacrifice of detail. The effect is like that of a cooking show, but we're cooking something special.

Papazian instills good habits from day one, among them safety, sanitation, record keeping and responsible drinking. He stresses that the homebrewer is part of the beer renaissance and points out the incredible number of beer styles that only the homebrewer can concoct.

The second beer he makes is a bock containing specialty grains and multiple hop additions. Through this beer we learn about brewing to meet stylistic criteria, and the reality of not always achieving them. In this instance we find that the gravity is low; we are going to have a light (1.055) American-style bock. We accept it, knowing it will nevertheless be a tasty beer, and we don't worry. Silly as it may seem, not worrying is one of Papazian's greatest contributions to homebrewing.

One of the amazing things shown in this video is an "on-premise" brewing facility in Toronto. These sophisticated breweries enable the homebrewer to brew a filtered, fined, artificially carbonated, counter-pressure bottled beer with minimum effort. Efficient perhaps, but Charlie's way better satisfies the soul.

Homebrew With Charlie Papazian will not replace a good homebrew text, but it will go far to relieve anxiety and bring the procedures to life. It is comforting to be shown the broad brush strokes, with the detail close at hand on the printed page. (Soma: film and video, \$29.95.)

—Jim Dorsch

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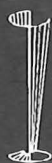
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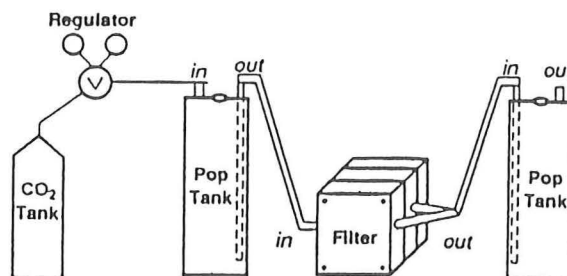
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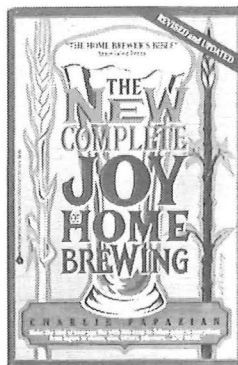


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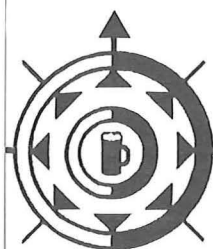


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HOME BREW CLUBS

JAMES SPENCE

This issue's club news is from clubs in Division 2 which includes Delaware, Maryland, West Virginia, Virginia, North Carolina, South Carolina, Tennessee, Kentucky, Georgia, Alabama, Florida, Mississippi, Louisiana, Texas, Arkansas, Oklahoma and Kansas. For contact information, see the individual club listings in "New Clubs" and "Veteran Clubs." If you have any changes or questions regarding your club's entry, please contact James Spence at (303) 447-0816.

North Florida Brewers League, Tallahassee, Fla.

The North Florida Brewers League boasts an active membership of 30 to 40 avid zymurgists. They meet once a month at a local microbrewery for a short business meeting followed by a "beer-of-the-month" tasting to compare members' homebrews to commercial brands. The NFBL is active in the community, sponsoring Red Cross blood drives and American Cancer Society fund-raisers. In spring and fall members conduct brewing classes through Florida State University to introduce students to the world of homebrewing. The entire club participates in an Oktoberfest at a local mall. Each member contributes beer to give the public an opportunity to taste what homebrewers take for granted. The club is open to all interested people to encourage creativity and good taste.

Redstick Brewmasters, Baton Rouge, La.

The club had a New England Beer Tasting last December featuring beers from Catamount, Samuel Adams, Post Road and Geary, and took a field trip to the Abita Brewery in Abita Springs. A fine time was had by all, thanks to Jim Patton of Abita.

Palmetto State Brewers, Columbia, S.C.

The Palmetto State Brewers got off to a strong start with 35 active members within a three-month period. The first homebrew class in South Carolina is being offered at University of South Carolina through the efforts of the Palmetto State Brew Club. The Palmetto State Brewers correspond with clubs around the world, writing to a different one each quarter to gather club updates, events, recipes and competition advice.

Brewers United for Real Potables (BURP), Hyattsville, Md.

BURP's 10th anniversary year finished with the annual Halloween Weird Beer contest (won by Dick Roepke with his "Persimmon Beer"), an all-grain brewing demonstration, a fest beer competition (won by outgoing newsletter editor Erik Henchal), a gourmet commercial beer tasting (provided by Phoenix Imports) and the traditional holiday banquet at Washington's famous Brickseller Pub. The new year started off right with the annual IPA competition (won by defending champ Jim Busch), the Dan McCoubrey Memorial Stout Competition (named after the club's founder) and a two-night homebrew demonstration and tasting at the Brickseller for more than 300 beer lovers.

TRUB, Chapel Hill, N.C.

TRUB began the year tasting homebrewed and commercial porters and stouts, and will focus on pale ales in the summer and Oktoberfests during the fall. In addition to special beer nights, they will continue to have spring and fall picnics and a winter solstice party. Interested homebrewers in the Triangle area are encouraged to come to meetings (take beers to share). Contact Lucy Adams or Andy Kligerman at (919) 942-8925.

Cowtown Cappers, Fort Worth, Texas

The Cappers feature a different style of beer every month with commercial samples and a homebrew contest for that style. Monthly contest points are added at year-end to determine the master brewer for the year. They are proud to have won the 1991 Bluebonnet Brew-off and the 1991 Alamo Cup, and are determined to get the Dixie Cup. Annual events include a Christmas party, a spring weekend in N'Awlins (fair warning, y'all), and a late summer Oktoberfest Brew-in at a log cabin in east Texas. Next time you're in Fort Worth, give them a holler.

James River Brewers, Richmond, Va.

The JRB's momentum continued into '92 as they established "base camp" at the Iland Workshop Center in Richmond's Fan District. Under the direction of new president John Wise and a hard-working board, the club will focus this year on brewing education, with particular emphasis on brewing to style and refining brewing practices for quality and consistency. They'll still have time for fun, with all the usual social events and a bus trip to Baltimore in early summer, and will continue to advocate the responsible enjoyment of malt beverages in their community.

Bluff City Brewers and Connoisseurs, Cordova, Tenn.

The Bluff City Brewers have a new look, thanks to a new logo designed by James Ingram depicting the Memphis bridge and the new Pyramid Arena. The rapidly growing membership includes five brewers who have passed the BJCP exam. Congratulations to Chuck Skypeck who is now a national judge. The most "hard core" brewers are considering an expedition down the Escatawpa River to find the mead buried by the Lower Alabama Lagers. They won't forget about the Mid-South Fair in late September one of two great beer competitions put on by the Bluff City Brewers in Memphis.

Lower Alabama Lagers, Wilmer, Ala.

The 10th Annual Chief Slackabamirimico's Buried Treasure Hunt takes place on the first weekend in June. Forty pints of St. Bartholomew's pure golden mead will be buried in the cool gray-green grassy banks of the Escatawpa River during a two-day float trip. Field trips to Abita Brewery (via New Orleans), and to their good friend Steve at McGuire's in Pensacola, Fla., (via Gulf Shores Beach) are planned.

Kansas City Bier Meisters, Lenexa, Kan.

With more than 200 entries from coast to coast, the Kansas City Bier Meisters ninth annual February Homebrew Competition was a dazzling success. The weekend activities included not only beer evaluations, but also tours of the Free State and Boulevard Breweries and the Beer Judge Certification Exam. A new feature at this year's meetings has been the "style of the month," which includes a discussion of the style, its origin and a club-financed tasting. "Style of the month" beers are not available in Kansas City, so some fortunate club member has to travel to buy beer for the tasting. Maifest, the club's annual spring brew-ha-ha in the park with

NEW CLUBS

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Society of Wine Ale and Lager Lovers Out West (SWALLOW), c/o Vinnie Cilurzo, 41220 Calle Contento, Temecula, CA 92592, (714) 676-5250.

The Tandem Malt Processors, c/o Neil Johnston, 19191 Valco Pkwy. MS4-24, Cupertino, CA 95014-2525, (408) 946-6064.

FLORIDA

Bradenton Brewski's, c/o Chet Kedzierski, PO Box 51, Bradenton, FL 34206, (813) 747-2437.

GEORGIA

Ale Atlanta, c/o Coby Glass, 1374 Cumberland Mall, Atlanta, GA 30339, (404) 435-2244.

Brew-52's, c/o Robert Hall, 450 Ruth St., Athens, GA 30601, (404) 369-1285.

Chicken City Ale Raisers, c/o Rick Foote, 6252 Brookfield Dr., Murrayville, GA 30564, (404) 983-1135.

The Clergy of Zymurgy of the Golden Isles, c/o Steve Pechin, Route 2 Box 9640, Brunswick, GA 31525, (912) 265-2233.

IOWA

Cedar Rapids Assoc. of Zymurgy, Yeastology, and Homebrewers (CRAZY Homebrewers), c/o Gary Cotton, 401 Norwick Rd. S.W., Cedar Rapids, IA 52404, (319) 396-3818.

MUGZ, c/o Dan Bensink, PO Box 466, LeClaire, IA 52753, (319) 289-3492.

ILLINOIS

Club Wort, c/o Jim Thommes, 5504 Deerfield Lane, Rolling Meadows, IL 60008, (708) 397-7648.

Homebrew SIQ, c/o Ross Goeres, 25 N. 11th St., Belleville, IL 62220-1044, (618) 277-4243.

MASSACHUSETTS

Hampshire Brewing Collective, c/o Rob Young, Hampshire College PO Box 1527, Amherst, MA 01002, (413) 549-7604.

The Spinal Taps, c/o Dr. Michael Biblyk, 268 Centre St., Newton, MA 02458, (617) 527-4255.

NEBRASKA

Barley Pops and Alewives, c/o Marilyn Kielniarz, 1402 S. 52 St., Omaha, N.E. 68106.

NEW YORK

The Borderline Yeast Infectors, c/o Gary (Doc) Dougherty, 465 Court St., Binghamton, NY 13904, (607) 722-2476.

Wort Ever Ales You, c/o Andrew Schmidt, 307 Quaker Rd., Chappaqua, NY 10514, (914) 238-4549.

more homebrew than could possibly be consumed, drew an enthusiastic crowd of beer buffs and aided in the growth of membership.

BANOVA (Brewers Association of Northern Virginia), Falls Church, Va.

BANOVA had a great year. Fall was unbeatable with Oktoberfest and Halloween parties and the year ended with the annual Christmas bash at Lat Steven's house. "It is exciting that homebrew can bring so many wonderful people together," they say. The military has been unkind to them, sending several members to other parts of the brewing world. The club is very near capacity and looking for someone in the northern Virginia area to start a sister club. They are ready to help in any way; just call.

The Hogtowne Brewers, Gainesville, Fla.

The Hogtowne Brewers was established more than seven years ago and has grown to almost 150 members who are proud of the many ribbons won over the years. Members come from almost every continent and occupation. Club activities include monthly brewing parties, monthly social parties and the annual Hogtowne Medieval Faire. Homebrewers visiting north central Florida are welcome to drop by and have a homebrew. Call (904) 375-3772.

Borderline Brewers, El Paso, Texas

Sept. 7, 1991, was the birthday of a new homebrew club headquartered in the dusty streets of old El Paso and disorganized by the expatriate Foam Ranger, Mike Seidensticker. Thirteen rabid, foaming-at-the-mouth homebrewers attended the inaugural meeting and the club's Money Grubber, Jo Willems, now reports 19 paid members. The first legislative act passed by the fledgling club was to name itself the "Borderline Brewers." An obvious reference to El Paso's geographic location at the borders between two states and two nations, the name also incorporates an element of jocular self-deprecation, because the members fully intend to display the skills of much better than "borderline" brewers. Experience levels range from novice to advanced, and they're always looking for new faces, so get in touch with them if you would like to join a diverse group of homebrewers dedicated to making and drinking great beer of all types.

East Tennessee Brewers Guild, Knoxville, Tenn.

Returning after an eight-year absence, the "yellow" beer blind tasting was held in February at Ridge Beverage Sales' bar in Oak Ridge. "Blind" was an apt description of the affair because the first- and second-place winners were amber beers! To everyone's relief, Old Milwaukee came in last, vindicating their taste buds! The club motto: anarchy rules!

Louisville Area Grain and Extract Research Society (LAGERS Ltd.), Louisville, Ky.

The LAGERS celebrated their second anniversary in January. Highlights of the past year, which will be repeated, include a picnic-campout (they will christen a new industrial-strength cooler-tap system) and participation in the regional "Beer & Sweat" at Oldenberg. Theme beer presentations and beer paraphernalia raffles will be regular meeting features. New events include a homebrew competition at the Kentucky State Fair and a commercial beer tasting at the Strassenfest festival. Club praise was bestowed upon Jackie Keith for his second-place finish in the Trappist Ale category of the AHA national competition last year.

Hampton Roads Brewing and Tasting Society, Virginia Beach, Va.

The Hampton Roads Brewing and Tasting Society has 51 members and meets monthly. Member

OHIO

Columbus Homebrewers Under-stand Good Stout (C.H.U.G.S.), c/o Walter den Haan, 6600 Dublin Rd., Delaware, OH 43015.

Youngstown Area Homebrewers of Ohio (YAHOO), c/o Bob Bero, 5011 Mahoning Ave., Youngstown, OH 44515, (216) 633-1035.

PENNSYLVANIA

Keystone Keggers, c/o Andrew Kovalchick, 421 N. Lumber St., Allentown, PA 18102, (215) 821-4808.

TEXAS

The Mashtronauts, c/o Michael Wiley, 17050 Hwy. 3, Webster, TX 77598, (713) 338-2241.

VIRGINIA

Rappahannock Engineers of Ales and Lagers (REAL), c/o Jerry Hoehn, PO Box 504, Locust Grove, VA 22508, (703) 972-7467.

WASHINGTON

Columbia River Ale Brewers Society (CRABS), c/o Stan Smith, Coho Loop #10, Cook, WA 98605, (509) 538-2299.

The Red, White & Brew Society, c/o Alan Moen, 253 Independence Way, Cashmere, WA 98815-1091, (509) 782-1147.

Whatcom Homebrewers Club, c/o Leonard Kerr, 613 E. Axton Rd., Bellingham, WA 98226, (206) 398-7942.

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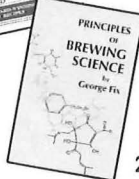


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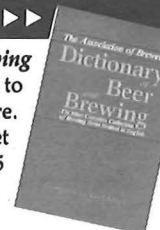
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expertise ranges from rank novices to certified judges, extract to all-grain, and simple ales to fruity meads. February elections chose new officers; Chris Jones, president; Vic Williams, vice president; and Roger Dellinger, treasurer-newsletter. Ron Young will continue to handle publicity and is the contact person at (804) 427-5695. Meetings are the first Wednesday of each month and visitors are always welcome.

James Cook University of North Queensland Home Brewers Guild, Douglas, Queensland, Australia

The James Cook University of North Queensland Home Brewers Guild is a social club affiliated with the University's Student Union located in tropical North Queensland, Australia. The club has a history of small, though vigorous, meetings with the emphasis on good times, socializing and homebrewing. The guild's aim is to promote better brewing techniques through a series of monthly meetings and discuss important world topics, such as football, good food, the economy, good pubs and the price of a "tinny." Their location in Townsville with more than 300 days of sunshine per year allows meetings to be held outdoors. The Guild provides ice and 200 mL tasting glasses while members take roughly six tallies (750-mL bottles) of their golden throat charmers for tasting and competition. "However, unlike our uncouth wine-tasting colleagues, the brew is swallowed and not spat out," they say. Points earned at each meeting contribute to the Master Brewer award, won last year by Paul Tower.

Rapscallions Ltd., Wichita, Kan.

Dan F. Davis was elected president and Dan R. Davis vice president. The club is planning to make a contribution to the hobby of homebrewing through education. Club contests are scheduled for March and July, a calibration for Oktoberfest. Dan F. and Dan R. attended the regionals in Kansas City and Dan R. won best of category for dry stout.

Montreal Association of Serious Homebrewers (MASH), St. Bruno, Quebec, Canada

A Montreal-area brewing club has been formed for all brewing enthusiasts with meetings every six weeks. Contact Scott Vitus, (514) 441-9529, or Ken Wilson at Gordon's Cave-a-Vin, (514) 486-8467.

Bay Country Brewers, Baltimore, Md.

Well, here it is, the little club that could. Last June a few people with a dream officially recorded the Bay Country Brewers. The 20 members successfully staged a three-club tasting in February at Cafe Tattoo, Baltimore's four-star, internationally recommended rib house. Fullerton Liquors, a complete homebrew supplier, sponsored the event and awarded gift certificates for the three best brews.

Mashville Brews, Nashville, Tenn.

Mashville® Brews are a seven-year old club with between 12 and 20 active members who range from beginners to professional brewers. They try to have at least one annual meeting at the Bohannon Brewing Co., makers of Market Street Beer. Meetings are usually informal.

Ale Atlanta, Atlanta, Ga.

Ale Atlanta, the city's premier homebrewing club, is conducting an in depth judging to determine the best of Atlanta's beer pubs in order to engage a healthy competition among recognized "Beer Pubs" and increase public awareness of the better beers in the city. Club members rate each pub using a series of relevant criteria including beer selection, service, food, location and ambiance. The process began Feb. 16 at the Groundhog Tavern and will end in August. Contact Coby Glass at (404) 435-2244 for a list of locations, dates and addresses.

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Edmonton Homebrewers Guild, c/o Larry Simpson, 4607 131 Ave., Edmonton, AB T5A 3G7, (403) 476-7897.

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Montreal Association of Serious Homebrewers (M.A.S.H.), c/o Scott Vitus, 1385 Garneau St., Bruno, QC J3V 2V5, (514) 441-9529.

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The Japan Homebrewing Promotion Association, c/o Miyana-Biru 301, Motoakasaka 1-5-1 Minato-Ku, Tokyo.

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Amylase, c/o Tommy Sandstrom, Tornrosvagen 29, Molnlycke, 43531, 031-882371.

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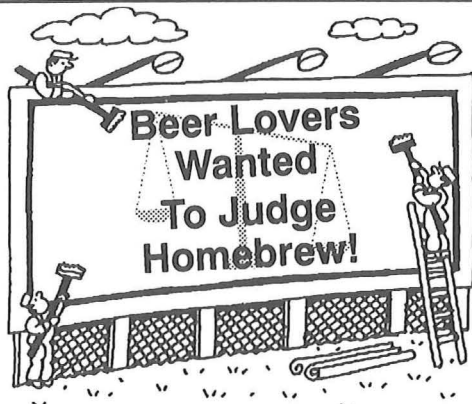
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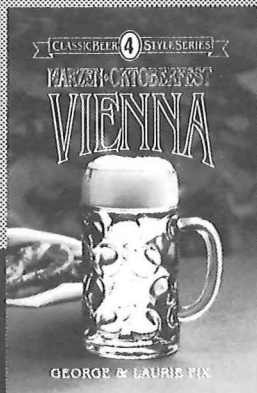


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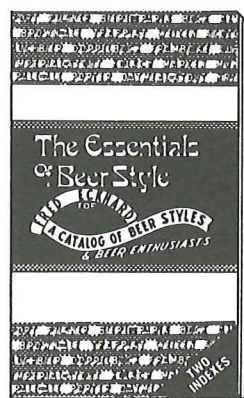
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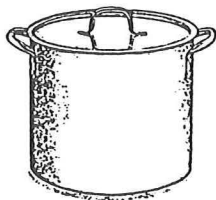
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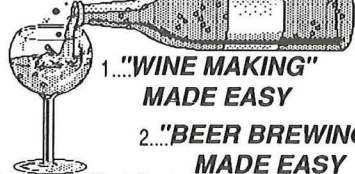
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continued from page 78

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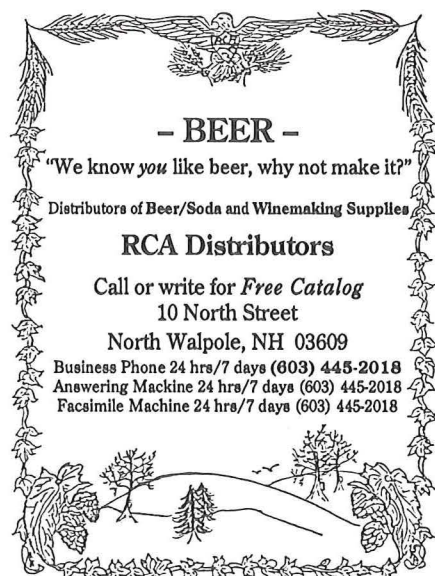
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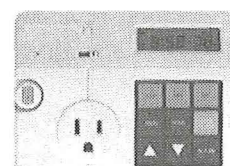
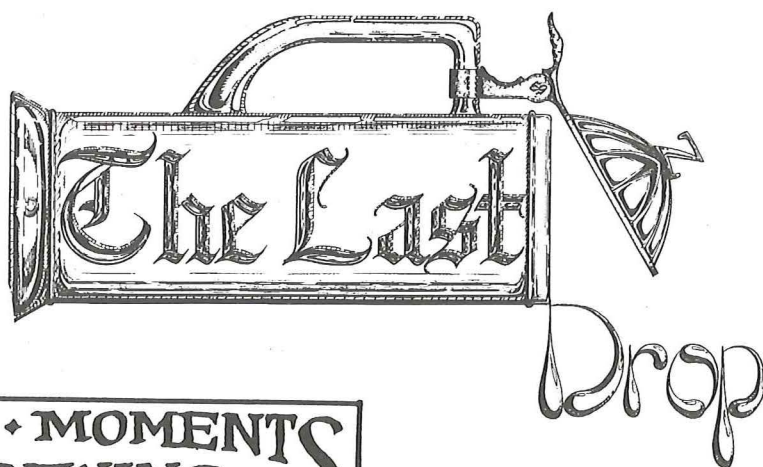


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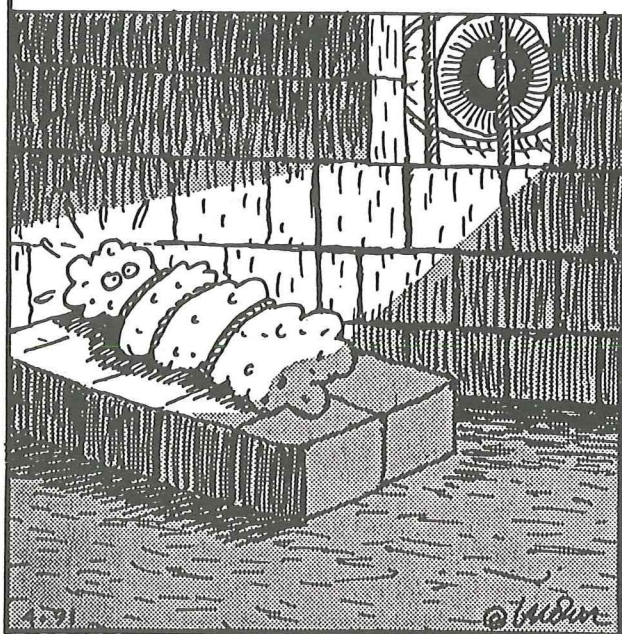


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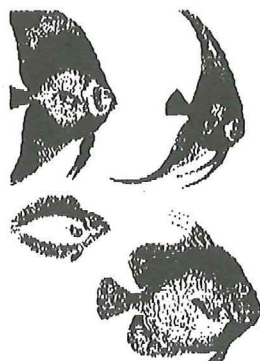
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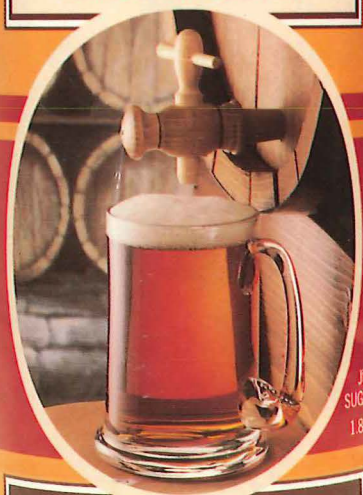
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