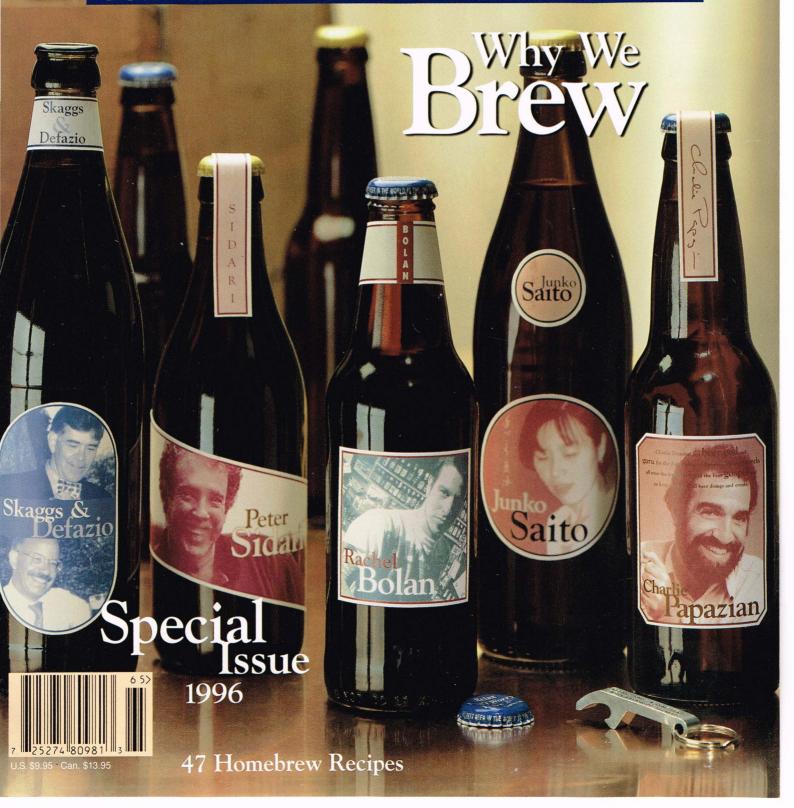
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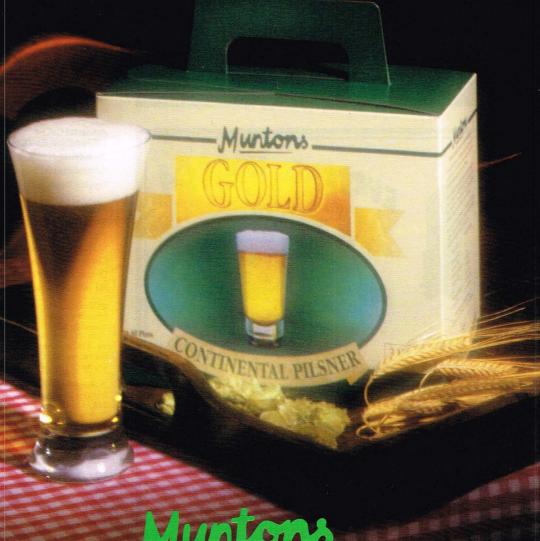
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To promote public awareness and appreciation of the quality and variety of beer through education, research and the collection and dissemination of information; to serve as a forum for the technological and cross-cultural aspects of the art of brewing;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

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ZYMURGY

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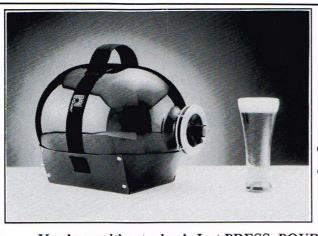
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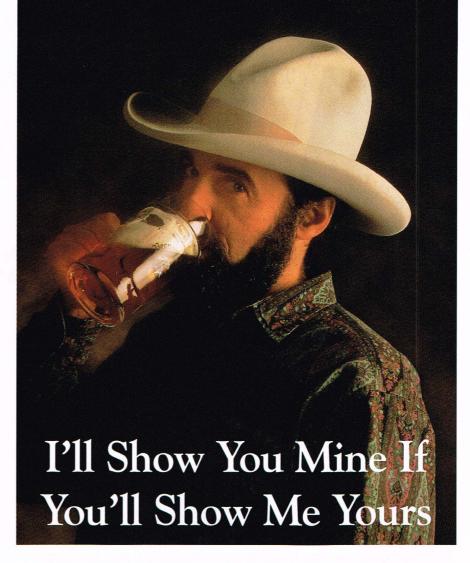
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ost people simply assume when I travel around the world I only visit commercial breweries. That I do, but they are not my only encounters. In fact, most of the brewery gems I've discovered in recent years have been homebreweries. And you better believe the quality of homebrew around the world is, without any doubt in my mind, among the bestmade beer in the world.

You'd think after 18 years of involvement with the American Homebrewers Association I would have found something unifying among the tens of thousands of homebrewers I've encountered in America. Nope. They continue to defy a stereotypical portrait, except for one thing: they have, we have, you have, passion. I kind of knew that, but it really didn't impact me until my recent travels around the world had taken me into the realm of the international homebrewer: Japan, Australia, New Zealand, Sweden, The Netherlands, Belgium, United Kingdom, Germany, Russia, Argentina, Brazil and elsewhere. The passion for quality beer and diversity is our binding thread.

It astonished me to see some rather sophisticated homebrew networks in far-off places. The Japanese brew interesting and unique recipes. The Dutch homebrew some of the best Belgian-style ales I've ever had. The Swedes fabricate some of the most sophisticated brewing equipment I've seen. The Germans yearn to establish diversity and a broader perspective on their appreciation for beer and feel some pride of ownership in their rich tradition. The Aussies are pioneers establishing the foundation for beers other than ice-cold lager. The New Zealanders have been at it for decades and their persistence has established a grand quality homebrew movement in that country. Strangely enough, the few Belgian homebrewers are seeking diversity in their beers - diversity from the ordinary yet astounding variety of Belgian ales.



CHARLIE PAPAZIAN is president of the Association of Brewers, editorial adviser for Zymurgy and author of The New Complete Joy of Home Brewing (Avon, 1991) and The Home Brewer's Companion (Avon, 1994).

No matter where we are in the world, we want it all. We want to have the opportunity to brew anything possible. Our own national brewing traditions never seem to be enough. We are perpetual pioneers. Homebrewing becomes a perverse perspective in its own environment. Germans brewing British ales. Dutch brewing Belgian ales. Americans brewing African sorghum beer. Japanese brewing saké and passion fruit ales.

What's the attraction? It's the world, isn't it? We see the world of beer out there and we want it all, don't we? The ingredients, the equipment, the techniques; we want to know and have it all in our own special and unique way. We want the beer too, don't we? But you know, sometimes I have perverse thoughts, too, and I think, just for a moment through the bubbles in my beer,

that the beer is secondary to the world surrounding the homebrewer.

It's the journey we all love. Hell, if our destination were the glass of beer, we would have reached it a long time ago and would have no other reason to continue our journey. Indeed, it is a journey as you will most certainly note and enjoy in these fascinating pages of the American Homebrewers Association 1996 Special Issue of *Zymurgy*. I highly commend Dena Nishek as editor of *Zymurgy* and the staff of the American Homebrewers Association for taking this bold and unique approach to portraying our world of homebrewing.

Hey, if you're ever around my neck of the woods I'll show you mine and we'll have a brew, just as we have all done for each other around the world.

This is Sean. He's our beer guy.

Matter of fact, around Brew King, we call him "The Beer Guy". After all, he knows a thing or two about beer. And as you can see, he's pretty happy right now. Why? Because after months of self-imposed exile in Brew King's (windowless) brewing lab, Sean has emerged with

Wort Works, an of pure perfection standards. You see,

elite group of home

the ones that scoff at most insist on choice natural ingredients masterpieces. With Wort Works, all-malt brewing kit Sean's by even Sean belongs to that brewing purists commercial brews and for their own brewing Sean would never cut

corners. So what has Sean created? A totally unique, bag-in-a-box packaged

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product offering 9 litres (2 gallons) of concentrated wort made from 100% barley malt with naturally processed hops and

filtered Canadian water,

fully

boiled in our brew kettle.

1000 gallon Sean even insisted on including a special dry hop package for extra aroma and flavour. And true to form, his instructions are comprehensive,

even with information on the specific

fellow homebrewers in that its user friendly, for beginners too. proud. Try Wort Works. you (and your friends)

ingredients used. Sean's no dummy. He made Wort Works with his mind, but he also made sure no-boil method would be perfect Keep Sean happy. Make his Mom The results will make happy too.



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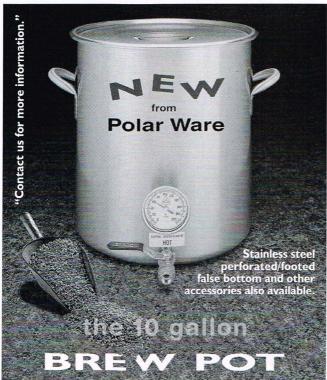
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electing a theme and creating a Special Issue is always a fun challenge. This year's subject, Why We Brew, had extra levels of complexity: selecting 24 interesting people to profile out of a potential pool of thousands, finding eloquent authors to induce stories from them and locating photographers who could capture a personality and a brewing system in one short session.

You might wonder how we picked the people we did, or why we didn't pick you. Ideas came from AHA members, "Hey, I know this really interesting homebrewer who wins competitions all the time ...," from members of the AOB staff, "I met Representative David Skaggs at a book signing in a homebrew supply shop in D.C. *Zymurgy* should do an article about him," and from a public relations firm, "He's more famous than Kathy Ireland — he should be in *Zymurgy*."

A 1995 AHA survey of Beer Judge Certification Program judges tipped us off to homebrewers with lots of interesting occupations. In the end, it came down to a willingness on the part of the subject, a local (or close) author and some overall diversity in terms of geography and occupation, some well-known names and some relative unknowns.

What is captivating about all of their stories is the diversity of their lifestyles plus what we all have in common — homebrewing. We've assembled an impressive lineup of profiles as a celebration of the diversity of homebrewers, to take a look at who we are and why we brew. The people featured are homebrewers or beer lovers,

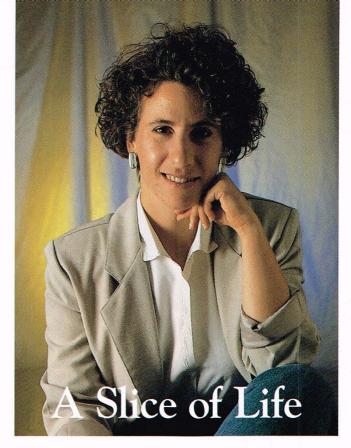


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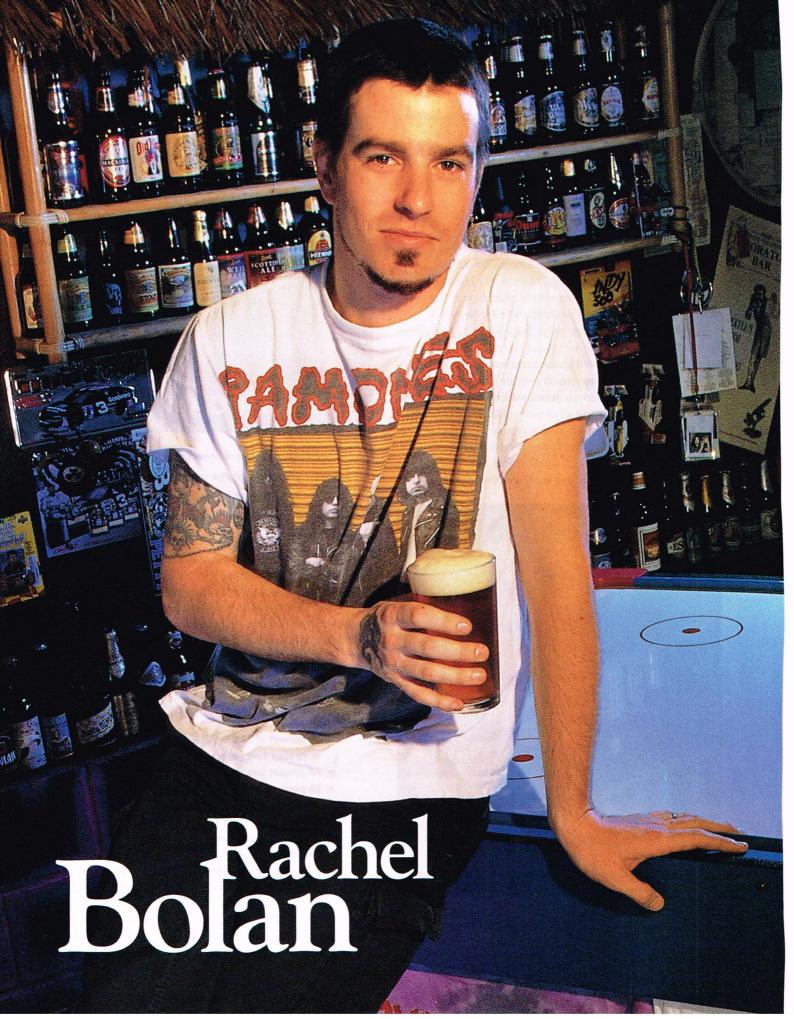
DENA NISHEK, editor of Zymurgy, has been homebrewing for five years. To relax after meeting multiple publishing deadlines, she enjoys gardening, reading, tandem cycling with her husband Sam and spending time with their cats Peter and Mango.

of course, but beyond that their backgrounds and professions are diverse: firefighter, rock musician, politician, homebrew shop owner, doctor and salesman, to name a few. They have other hobbies, busy schedules, careers, families and varying degrees of beer enthusiasm.

In capturing their stories we've taken a slice of the homebrew demographic. With that slice we can see the individuals who make up part of the whole we've described so many times:

- 97 percent are male
- 75 percent are married
- 75 percent have at least a college education
- 53 percent have an annual household income in excess of \$56,000
- 25 percent of AHA members have been brewing for more than four years
- 50 percent buy homebrew supplies from retail shops
- 30 percent are affiliated with a homebrew club
- 62 percent don't brew with spouse (but read pages
 88 through 92 for a slice of the other 38 percent)
- 86 percent brew because they enjoy the process and the end product
- 6 percent brew for the science and process more than the beer

This Special Issue is an interesting read and a beautiful magazine. We hope the people on these pages inspire your next batch of homebrew or prompt you to share homebrewing with a friend.



Rock star Rachel Bolan is a bassist, lyricist and co-founder of multiplatinum Skid Row, but when there is time between tours and recording sessions he enjoys dreaming up his next homebrew.



achel welcomed me into his beautiful light and airy home tucked in the trees in an exclusive neighborhood on the New Jersey shore saying, "I wish I could offer you a homebrew, but a couple of my band mates were over yesterday and drank me dry." Rachel's living room was the first indication that I was in the home of a rock 'n' roll star. There was a guitar displayed on a stand in the middle of the floor, and gold and platinum records on the walls. We talked about music and beer, and enjoyed a few pints of pub draft Guinness.

Rachel co-founded Skid Row in early 1986 with fellow bandsman Dave "The Snake" Sabo. Skid Row's first self-titled album, released in 1989, got the band off to a solid start and has sold five million copies in the United States to date. Slave to the Grind, the band's 1991 offering, debuted at No. 1 and Subhuman Race, the most recent recording, have gone triple platinum — 3 million album sales combined. All told, the band has sold between 10 and 11 million album copies worldwide.

His passion for music is apparent. In addition to playing bass for Skid Row, Rachel augments his music fix by occasionally play-

ing guitar with the Brighton Bar Flies, a band covering late 70s and early 80s punk tunes. He also produced *Ride* (Atlantic Recording Corp., 1993), the first and only album from the "seriously heavy, heavy metal" band Godspeed. "Godspeed was great. They've been described as Black Flag meets Black Sabbath," he laughs. Godspeed has since broken up. Rachel's current side project is a band called Prunella Scales. "We play original music that's been described as old [David] Bowie."

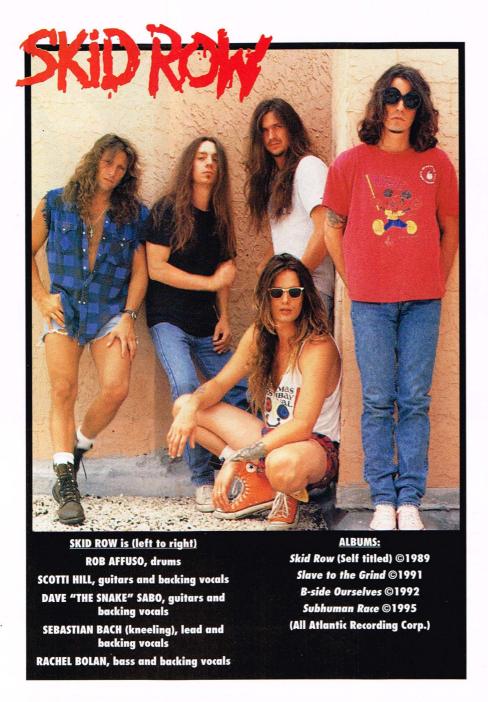
Rachel's discovery of great beer happened while on tour with Skid Row in Amsterdam where he discovered Duvel. After a gig he and the band went out for a beer. At the hotel bar (he is almost sure it was the Americana), he asked the bartender for something a little different. The friendly barkeep recommended Duvel, a Belgian golden strong ale, and explained the name was a variation on the Flemish word for devil.

"We drank the bar dry and all of us got pretty f---ed up," he recalls. Since then Rachel has been hooked on good beer. Prior to the discovery, though, he never really thought about beer. "Beer was just the yellow, fizzy stuff always backstage. I drank it but I never thought about what or why."

Author KEITH A. SYMONDS is head of brewery operations for Westchester Brewing Co. in White Plains, N.Y.

He began homebrewing in 1988 and is proud of being one of the youngest Master judges in the Beer Judge Certification Program.

He co-organized a first-round site for AHA National Homebrew Competitions in 1993, 1994 and 1995.



Rachel brewed his first batch of beer in 1992. The kit was a gift from his wife Donna, whose brother is also a homebrewer. Rachel and Skid Row were between projects, having just completed their multiyear, worldwide tour in support of *Slave to the Grind*. With some time on his hands Rachel tried homebrewing. Like most, he was hooked right from the start.

In addition to his discovery of real beer, "The biggest influence on my starting and continuing to brew is that my entire family is 'do-it-yourselfers.' My grandfather even made his own wine." Rachel maintains a 24-track recording studio in his basement that he and his father designed and built.

Also in the basement is a room he calls "the dive." His beer bottle collection, all

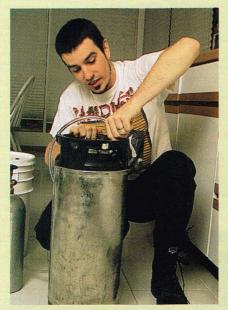
recapped, lines the walls. The dive is an expression of the private Rachel, his favorite things are all there: a comfortable old couch, the prized air hockey table center stage, a quirky assortment of alien toys and the NASCAR paraphernalia he collects.

The NASCAR items are what remains of his childhood desire to become a race car driver. "When I was 11 years old I decided I wanted to be either a musician or a race car driver. At the time, it was easier to go into music," Rachel laughs. Being the youngest of four children, Rachel says there was always music around the house. "My brother listened to The Doors and Santana. My sisters were into the Beatles. All of that music was good, then I got into shock rock: Kiss, Alice Cooper and punk. I started playing bass because that's what Gene Simmons played. I didn't know what bass was then, but I wanted to play what he played."

Like the dive, some of his homebrews turn out to be collections of favorite ingredients. Rachel says he likes to experiment with different ingredients - ravaging the refrigerator is a common technique frequently returning to his favorite, Bosco chocolate syrup. His first batch was a light beer from a kit, along the lines of an export, as he recalls. A light lager is now his house beer and accounts for about half of what he brews. Rachel keeps a log of the recipes he brews, but not how many times he actually makes them. He continues as an extract brewer, but graduated to the "Papazian method" of steeping specialty grains. He keeps his equipment simple, using a three-gallon (11.3-L) kettle for partial boils, glass carboys for fermentation and five-gallon (19-L) kegs for aging and dispensing. He uses primarily pale dry malt extract as a base for his recipes.

"I come up with a description of what I want the beer to taste like, and then I work with Wayne at Red Bank Brewing Supplies in Red Bank, N.J., to develop the ingredient list," Rachel says. In addition to his house beer he looks forward to the holiday season to brew something rich and spicy. Last

"I wish I could offer you a homebrew, but a couple of my band mates were over yesterday and drank me dry."



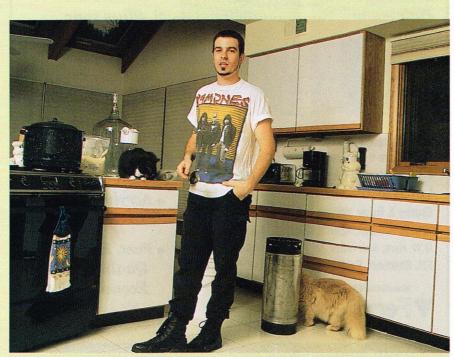
Bottling became impractical when Rachel's band mates got a taste of his homebrew. Now he uses fivegallon Cornelius kegs for conditioning and serving.

year, after a six-month hiatus from brewing because of a tour, he brewed a strong beer with chocolate, cinnamon and vanilla. "We always had good beer on that tour, but I missed my homebrew and couldn't wait to brew some more," Rachel recalls.

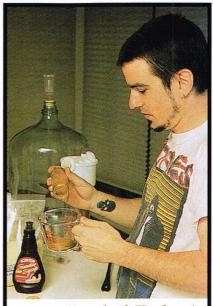
"This year I hope to brew my holiday beer in June and allow it to age properly, but I doubt my friends will let it last that long." Rachel and his friends finished his 1995 holiday beer in an afternoon of sledding during a snowstorm. Rachel says almost all of his phone conversations with friends are the same: "Hi, how you doing? When is the brew going to be ready?" As a result of his popularity, he has been forced to move from bottling to kegging all of his beers. "I'd like to bottle more, but kegging is just so much easier."

Homebrewing and great beer are a permanent part of Rachel's life. While recording the last Skid Row album in Vancouver, the band regularly went to brewpubs. In addition, Rachel befriended the owner of the local U-Brew and got him to brew Rachel's favorite recipes so he would always have a fresh pint of homebrew in the apartment where he stays while recording. "I didn't have time to brew, but at least I had my recipes to drink in my apartment after the recording sessions."

On their 1995 tour every concert contract had a rider requiring a stock of the local microbrews backstage. The Skid Row members got their tour mates Brother Kane into the act and the bands were constantly



Rachel's brewing is often assisted by his three cats Minx, Tiffany and Cleo. "They all love malt, but Minx likes to hang around during brewing."



Rachel Bolan's Chocolate, Cinnamon and Vanilla Deet

Ingredients for 5 gal (19 L)

- 6 1/2 lb amber malt extract syrup (2.95 kg)
- 1 1/2 lb pale crystal malt (0.68 kg)
 - 1/2 lb chocolate malt (0.23 kg)
 - oz Goldings hops, 7% alpha acid (28 g) (60 min.)
 - oz Goldings hops, 7% alpha acid (28 g) (five min.)
 - 1/2 lb Hershey's® Special Dark Chocolate, melted in a double boiler (0.23 kg)
 - 8 oz Bosco® chocolate syrup (237 mL)
 - 1/4 cup ground cinnamon (59 mL)
 - 4 vanilla beans, sliced open Wyeast No. 1007 German ale liquid yeast culture

Crush grains, add to straining bag and immerse in 2 1/2 gallons (9.5 L) of cold water. Bring mixture to near boiling and remove grains. Add malt extract and bring to a boil. Add bittering hops and whole vanilla beans. Boil one hour. Melt Hershey's in a double boiler. At end of boil add finishing hops, cinnamon, Hershey's chocolate and Bosco syrup. Cool, strain into fermenter and add yeast. Ferment at room temperature for two weeks. Transfer to keg and force carbonate.



Ale and Murphy's Draft cans, which were in his refrigerator, to whatever microbrews he can find. His favorite local hangouts for beer are Gimpy's, which features 10 taps and 150 vari-

eties of bottles with countless daily specials, and Basil Tealeaves with six taps and 50 bottles.

Before Skid Row left for a short tour of South America in late August Rachel studied the beer scene so he would be ready for the beers and breweries of Brazil and Argentina. He says he looks forward to touring and searching for more brewpubs and specialty beer bars throughout the world. His discovery of great beer in Amsterdam and his homebrewing led him into a new realm of experiences he has no intention of abandoning. Beer has always been a part of rock and roll, now rock and roll is a part of making beer.

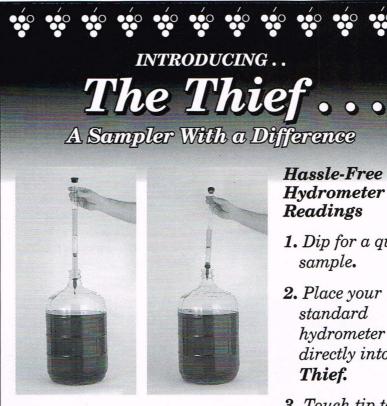
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swapping beers trying to find the best ones. "By the end of the tour we had collected so many great beers we had to store our luggage on the bus because we filled the underbays with beer," he remembers. They also visited brewpubs whenever they had a chance. The Rock Bottom in Denver, Colo., was one of Rachel's particular favorites, "The beers were really cool."

Rachel says the bass player from Brother Kane began homebrewing after the tour. Rachel also talked Snake, the guitarist for Skid Row, into homebrewing. "I really thought Snake would enjoy brewing," Rachel muses. But Snake limited his efforts to a single batch. "His beer was OK, but he prefers mine. I guess he won't brew again as long as I keep giving him mine."

Rachel's beer explorations are not limited to the United States. While on tour in Europe they specified Duvel, complete with the special tulip glasses, in concert contracts a number of times. While in Switzerland the beer of choice was Samichlaus, a strong ale released annually on Dec. 6, but unfortunately they arrived in November and there was no Samichlaus to be found. "The next time we play Switzerland, we are planning the date based on when Samichlaus comes out," he says. In Japan the band went to the Sapporo beer garden. "It was a hilarious evening," Rachel laughs. "Here we are, the wild rock 'n' rollers, and we were calm and sedate compared to the Japanese businessmen getting crocked and singing karaoke."

When he is not drinking his homebrew, Rachel's favorites range from Pete's Wicked



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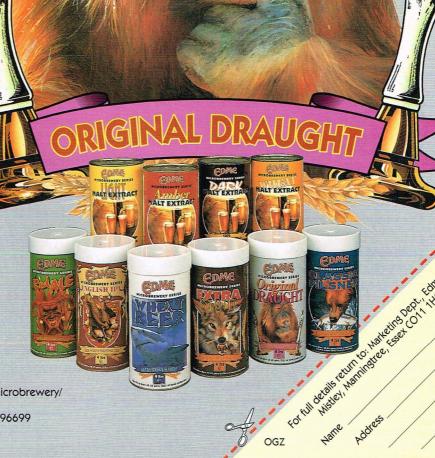
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Ray Call has been brewing his own beer for eight years. During that time he has garnered two consecutive California Homebrewer of the Year titles and advanced in his professional life from firefighter

for the Stockton Fire Department to captain and assistant fire marshall—

and he's a paramedic, hazardous materials technician and CPR instructor.

Author BETHANY JEAN CLEMENT is a writer and editor; among other pursuits she is a contributing editor for the San Francisco Review, edits the books of Susie Bright and is ever-so-slowly composing a serial semiautobiography.

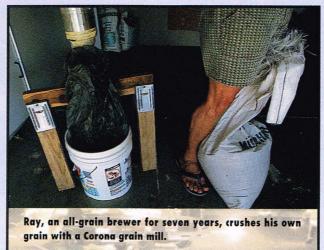
efore Ray took up homebrewing, his hobby was body building. In 1986 he won Mr. Northern California and came in fourth in the Mr. California competition, heavyweight division. Ray also is a family man with a wife and two charming young sons (who have a pet turtle named Max). Ray approaches whatever he does with a tenacity and intensity belied by his mild, kind manner.

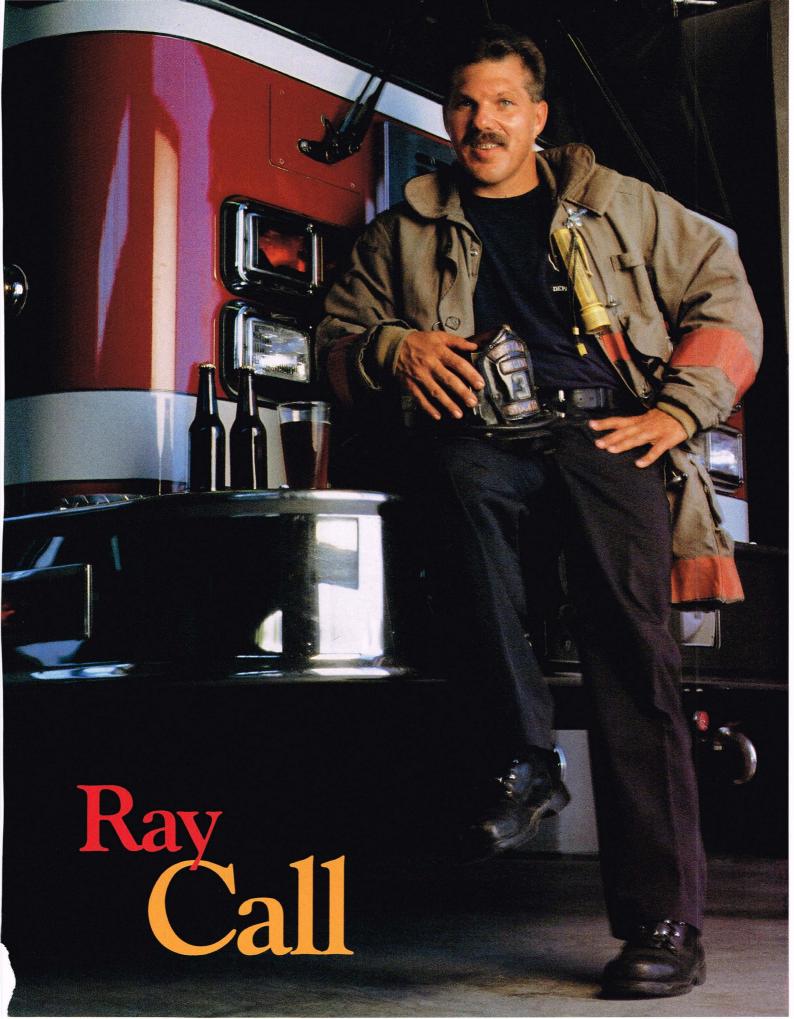
On my way to interview Ray, just outside Stockton I passed a sign informing me that the temperature on this late spring day was 109 degrees. As Ray led me through his comfortable, air-conditioned suburban home (complete with American flag and big new pickup truck in front) into the stifling heat of his garage homebrewery, I wondered how in hell one could make beer under such circumstances. (I didn't say "hell," though; the kids were around.) Obviously, a little heat doesn't bother a fireman.

"The main trick," he says laconically, "is to keep your fermentation temperature down. The way I do that is by submerging my carboys of beer or wort in water, and putting in frozen two-liter plastic containers of water, three a day, one every eight hours. It keeps the temperature down to 70 degrees. It's tough, you're sweating out there making beer 'cause it's hot, and you're boiling water and working

around hot material, but that's the key, keeping your temperature down. What I do is go in the house where it's air conditioned for a while, then go back out and check it. I'm only out there when I have to be out there."

Ray is a man comfortable with extremes. He is visibly and rightfully proud of his brewing accomplishments: "You have a few of your own beers and they're darn good, some of the best in the nation. It's a sense of pride. People know I'm doing well in the competitions and they like to come over and drink





Ingredients for 6 gal (22.7)

11 1/2 lbs pale malt (5.22 kg)

- 1/2 lb Carapils malt (0.23 kg)
- 1 lb 40 °L caramel malt (0.45 kg)
- 1/4 oz Cascade hops, 5.5% alpha acid (7 g) (80 min.)
- 1/2 oz Chinook hops, 11.8% alpha acid (14 g) (80 min.)
- 1/2 oz Cascade hops, 5.5% alpha acid (14 g) (five min.)
- 1/2 oz Kent Goldings hops, 4.7% alpha acid (14 g) (five min.)
 Wyeast No. 1056 American ale liquid yeast culture
- 1/2 oz Tettnanger hops (14 g) (dry)
 - 1 oz Cascade hops (28 g) (dry)
- Original specific gravity: 1.052

Mash at 154 degrees F (68 degrees C) for one hour. Boil for 1 3/4 hours, ferment at 70 degrees F (21 degrees C)



Ray first made this beer on the occasion of the birth of his son Tyler. It won Best of Show in the 1991 California State Fair.

some good beer, and they know where to find it," he laughs. But he's guilelessly modest about his methods, saying, "I don't do anything different from what anybody else does. I stick to the basic principles real closely. If I brew and it works, that's what I stick

with." He's highly competitive ("very goal driven, really intense and always looking for more," as he puts it), but also motivated by pure generosity. "It's the challenge to make a better beer, that's what drives me — either that or sometimes I just make beer to make my friends happy."

The key to Ray's brewing success is the kind of common sense that leads one to stick with what works, or come in out of a hot garage, coupled with a great deal of research. Early on he made a commitment to finding all the information he could, then learned when to disregard the experts' advice in favor of instinct. "I made some terrible mistakes in the first year I was

brewing beer and the mistakes were what cued me in to doing extensive research. I went to the University of California at Davis and got all the books and tried to decipher them. It was really difficult because I didn't have a big background in

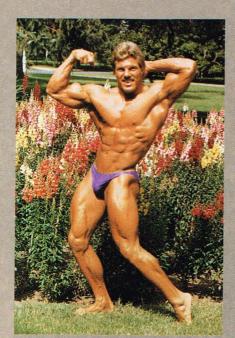
chemistry, and it's all based on chemistry. So it was interesting, to say the least.

"Then I found I had so many questions I needed to go to somebody who knew," Ray recalls. His search for a brewing education led him to visit "every brewpub within 120 miles," and ultimately to the expertise of Brian Hunt of Willett's Brewery in Napa. "Brian took me under his wing, and I had all these questions out of the books, and he basically told me what not to worry about and the stuff that it's OK to worry about. The books tell you you've got to worry about everything," Ray laughs. "But he taught me to just worry about these few things like reducing the temperature of the wort as rapidly as possible after the boil, careful sanitation especially during yeast handling, and your beer will always turn out OK. After that I was on my way. I knew anyone could make outstanding beer without being a chemist."

Perseverance has also been instrumental in his brewing; the infamous brown sugar incident might have stopped a lesser brewer. Ray confesses, "In those earlier years, I made a beer that was supposed to be a pale ale, and after the boil had finished I poured in brown sugar, thinking 'I'm going to make this concoction that everybody's going to love because it's got this brown sugar and it'll give it this certain flavor and nobody'll



Ray pours Munich malt into the hopper of his mill.



Ray took fourth place in the Mr. California competition, heavyweight division, in 1986.

know what it is.' And I didn't sanitize the brown sugar; I actually poured it into the fermenter, which had already cooled down. And I bottled in clear Pepsi bottles, which is wrong because [the beer] gets light struck. And of course when you opened them they just fizzed all over. Until I learned the concept of sanitation I had quite a few of those little mishaps: overcarbonation, wild yeast and nasty-tasting beer."

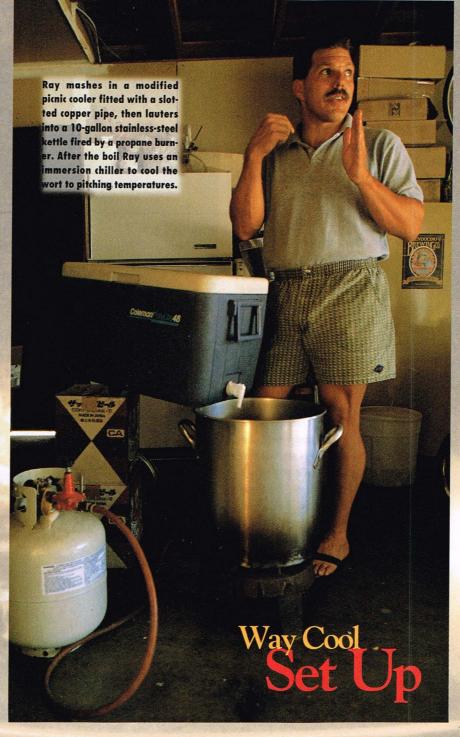
But persevere Ray did, making three sixgallon brews a month during his days on the line as a firefighter. He had 24 hours at work followed by 48 hours off. "It was great for brewing," he says, "I could brew like crazy." He found that being detail oriented and a bit of a perfectionist, qualities essential to his work, served him well in making beer. "It was for the art," he reports, "I'd give it away - it was the brewing and the end product. It wasn't to drink the six gallons of beer. I could drink one or two beers and then I'd know, OK, next time I'm gonna do this. Then about three months down the road I'd try it again. I was continually leapfrogging beers: I'd make a pale ale, a porter, a stout, a Scotch ale, and then three months later I'd be back making that beer again and trying to tweak it so it's just right.

"There are still quite a few beers where I felt like I was missing something, like I

wasn't quite there yet. Actually, to be honest with you, I never felt like I nailed it. But that's part of the process of getting better and better," he philosophizes.

One hundred firefighters are killed and 100,000 are injured in the line of duty each year in the United States. I asked Ray about the challenges of firefighting, and he told me, "Fires are completely uncontrolled.

It's a dynamic, ongoing process, and you never know what you're going to be dealt once you go into the fire or you're on the emergency scene. You never know what's going to be required of you. It could be hauling people out of cars or out of buildings, or dragging equipment around; you have to do what's necessary to put the fire out." I wondered whether, considering this,





Ray explains that the slotted copper pipe fits into a picnic cooler he has converted to a mash tun. The slotted pipe allows sweet wort to drain into the kettle while leaving the spent grain behind.

the regimented, calm aspects of homebrewing might be an attraction for him. He pondered the idea but denied it, insisting he likes homebrewing for "the challenge; it's having a goal and then reaching it."

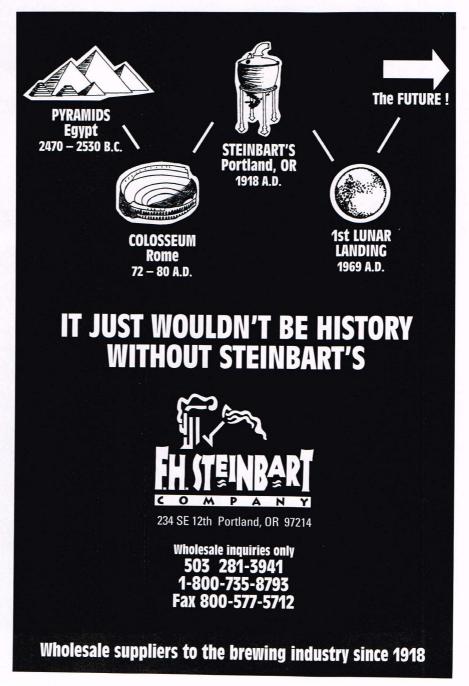
Ray, also a BJCP Certified judge, offered another insight into the competitive aspects of brewing. "All my beers tend to be a couple notches 'more' than the traditional recipe would call for. There's a trick there: if you know anything about competing, as in body building, two people can stand right next to each other and be exactly as good as each other, but if one guy is six foot two and the other is five-eight, the guy who's six-two is going to win every time. The same thing happens with beer. If you think about it as a judge, you've got 15 beers and it's the one that's a little bigger, with a little more flavor, that you're gonna pick out because it stands out.

"That's a key for people in competition. I complain about it, actually, but that's the trend. If you were to make an English bitter, a real English bitter, it would be very light, because the original gravity is only about 9, 9 1/2, 10 [degrees Plato], and that's quite light, vs. what people are making — they're making something with a gravity at 12 1/2 or 13 — and calling it a bitter. It's

not really within the style. I'd rather make beers traditionally, but if I did that they would never win."

Ray believes a background in food has helped him tremendously in brewing. "I attribute my success in beer making to the fact that I have a good sensory balance, because I've learned through culinary arts how to balance food flavors — sour vs. sweet, herb flavors vs. wine flavors, all the different balancing acts. Beer's the same process; it's a balancing act."

Ray's attitude is similarly balanced. He did some technical consulting for a local brewpub, and considered going into the beer business full time but, he says, "I love my job too much." Recently Ray passed the test to make battalion chief and should be promoted within two years. Studying for the exam took priority over his homebrewing, but now he's looking forward to assembling the 15-gallon brewing system he's already bought the equipment for. "I think that'll be my next project," he says, smiling.



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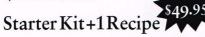
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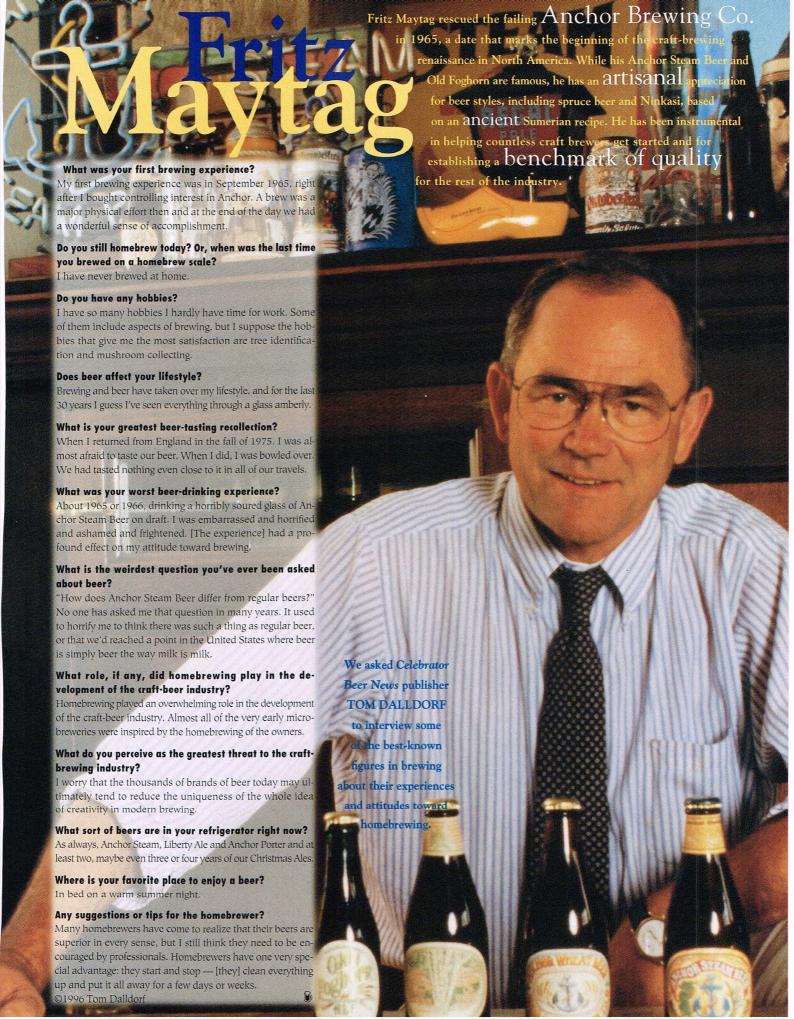
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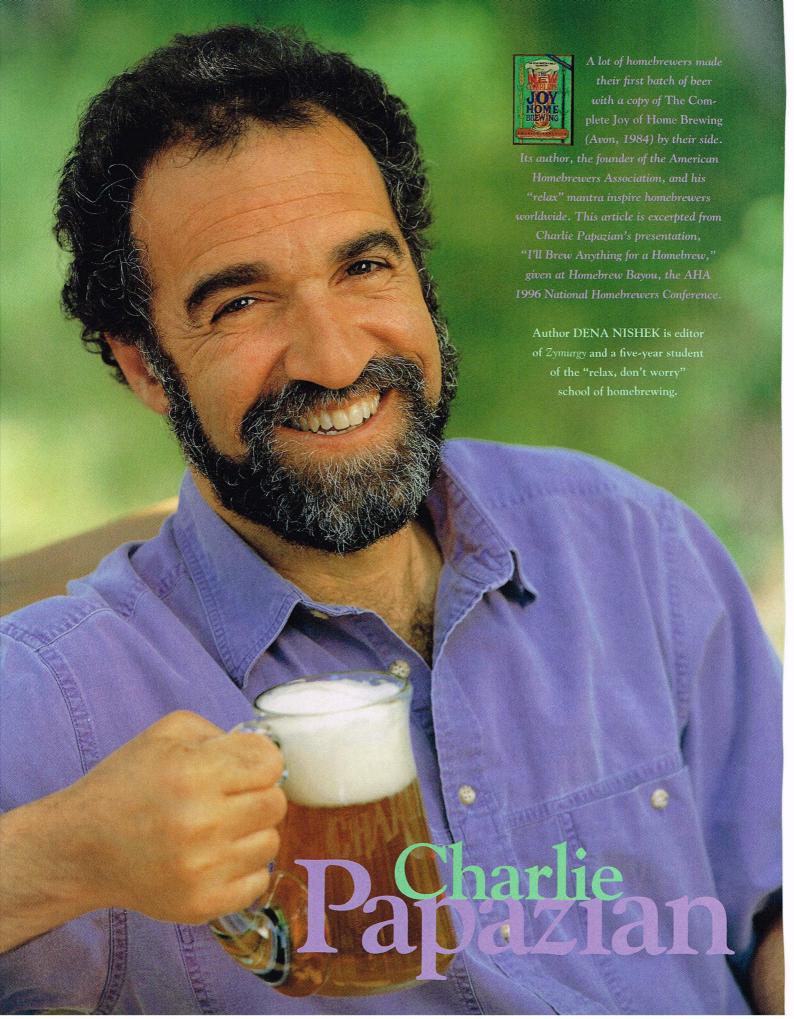
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RELAX, DON'T WORRY, HAVE A HOMEBREW.

People wonder how I got started homebrewing, why I brew, how I brew, where I brew and where the beer business takes me. You are all familiar with the American Homebrewers Associa-

tion motto, "Relax, don't worry, have a homebrew." Many ask where that came from? In the mid-70s my friend and co-founder of the American Homebrewers Association, Charlie Matzen, and I were homebrewing when we came up with the slogan. What we didn't know was how important it would be in our lives. I'll share a story to demonstrate how it rescued us from numerous situations.

We took a weeklong trip through the desert of New Mexico and Arizona, doing research, of course, on traveling with homebrew. Into the wilderness we went and, never wanting to go into the wilder-

ness without homebrew, we devised a way to maximize the amount of homebrew we could take. We turned down side roads no one else seemed to choose. One eventually turned into a dry wash, which we continued driving down until we were several miles from nowhere. We ended up stuck with a trunk full of homebrew. The sand was up to the rims of the tires and we couldn't get the car out.

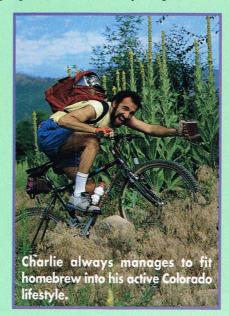
If you have ever been in the Arizona desert, you'll recall there is no wood, nothing to put under the wheels for traction. We turned on the radio as black clouds began to spill over the mountains and heard the flash flood warnings. We started to freak out. Then we heard a voice say, "Relax, don't worry, have a homebrew." So we opened the trunk thinking, "There is nothing we can do right now, so let's just relax and have a homebrew."

We had a beer and started joking about our situation as it started to rain. If it hadn't been for that homebrew we wouldn't have figured out what to do. About that time we were forced to make sacrifices. It occurred to us to put the empty bottles under the wheels to provide traction and that's how we got out. We spent the night in the desert in the rain, but safely so.

How do I homebrew? You might think I have a sophisticated system at home. For the last 13 years I lived in a house with a basement so I kept all my equipment in a closet. I'd bring out the equipment and brew on the stove. Eventually I got a propane cooker so I could brew outside in the hot summer months. I brewed on the cooker then carried the pot down to the basement and strained the hops out by pouring the wort through a funnel into a carboy. I fermented my brews

in a relatively cool basement: summertime temperatures about 70 degrees and wintertime temperatures 55 degrees. I have stainless-steel pots, plastic funnels and glass carboys.

In May I moved to a house that doesn't have a basement but does have a two-car garage, which I have weatherized for a brewery/workshop. I put in a walk-in cooler and a commercial refrigerator with glass doors. I have plans for a stainless-steel sink. For the first time in my life I am designing my own homebrewery and I'm going to have a place to brew beer that isn't part of my living area, though who knows, I may choose to live in the brewery. I might end up brewing a few more batches than usual. Generally, I brew about 15 batches of beer a year. That's about once a month when I am in town, sometimes two or more times a month to catch up.





How far is it from here to there? Same same but different.

What's the difference between the chicken coconut curry and the fish green curry?

What beach is better? Same same but different.

Is it cooler here in January than it is in June? Same same but different.

I'll have a Klosterbräu please. We no have. Have Singha. Same same but different.

Same same but different. Seems I learned a valuable lesson last time I was on vacation on the distant isles of Thailand. Everything in the world turns out to be same same but different. The Thais taught me this. It was true, for in a world that seems bent to the purpose of must do this and must be that, "same same but different" is the right answer. It works with a little shrug of the shoulder and "Oh well, sure ... " Try it next time someone asks you a question about directions, time, color, opinion or even about the beer you're drinking. It sure makes beer evaluation easy and a much more relaxing experience. Try it sometime. I might even be trying it on the next beer you give me and ask, "What do you think of this beer, Charlie?"

All beer is "same same but different." Isn't it?

I brewed this beer as my last batch in a house I had lived in for 13 years. I was asked to brew on camera for CNN's new cable television magazine, Earth Watch. I wanted to keep things simple, but not compromise on quality. I went to *The New Complete Joy of Home Brewing*, choosing the recipe for "Palace Bitter." My home had been my palace and this was the last batch. But I changed the recipe a bit here and a bit there, as all good homebrewers invariably do, and out came, "Same Same But Different (Charlie and Bruce's) Palace Bitter." You can see this batch being formulated and brewed on CNN's Earth Watch this fall. Meanwhile I'll be drinking the last drops of "Same Same But Different," a rather light-bodied, medium-flavored not-too-bitter light amber British-style bitter.

Recipe for 6 gal (22.7 L)

- 6 1/2 lb extra light spray-dried malt extract (2.95 kg)
 - 12 oz 20 °L English crystal malt (340 g)
 - 8 Homebrew Bittering Units/Alpha Acid Units English Challenger hops (60 min.)
 - 5 HBUs English Goldings hops (20 min., 10 min.)
 - 1/2 oz English Goldings hops (14 g) (two min.)
 - 1/2 oz Cascade hops (14 g) (two min.)
 Wyeast No. 1028 London liquid ale yeast
 - 3/4 cup corn sugar (177 mL) (to prime)
 - Original specific gravity: 1.038 (9.5 °Plato)
 - Final specific gravity: 1.010 to 1.012 (2.5 to 3 °Plato)
 - IBUs: 25

Add the crushed grains to 1 1/2 gallons (5.68 L) of water and heat to about 150 degrees F (66 degrees C). Hold for 20 to 30 minutes then strain. Sparge with 1/2 gallon (1.89 L) of 150-degree-F (66-degree-C) water. Discard grains.

To the specialty malt extract liquor add the dried malt extract and Challenger hops. Boil for 40 minutes. Add 2 1/2 HBUs of English Goldings and boil for 10 more minutes. Then add the last 2 1/2 HBUs of Goldings and boil for a final 10 minutes. Total boil time is 60 minutes. During the final one to two minutes add the aroma hops.

Strain into a sanitized fermenter to which you've added two gallons (7.57 L) of water. It helps to prechill (33 degrees F or 1 degree C) the water added to the fermenter rather than simply adding warmer tap water.

Primary ferment at temperatures best suited for your yeast and your circumstances. Prime with sugar and bottle when fermentation is complete. (I put three gallons into a keg and three in bottles.)

While waiting for this beer to age have another beer, which will be same same but different before Same Same But Different is ready. It ages quickly. You won't have to wait long. When it's clear you're there.

My packaging routine these days is to put three gallons in a small Cornelius keg, bottle two six-packs in 12-ounce bottles and put the rest in Champagne bottles or quart bottles. I have a menagerie of bottles — more different kinds than you can imagine — collected over the years.

I use liquid yeast almost exclusively. I keep my yeast under beer in canning jars or 12-ounce long-neck bottles. I've had one of my strains, a house yeast at this point, since 1983. It has been kept under beer at all times and I've never had a problem. In 1983, I was invited by the Master Brewers Association of the Americas and the American Society of Brewing Chemists to give a presentation as a homebrewer. George Charalambous, then a director at Anheuser-Busch, suggested I make a homebrewed beer and they would bottle and label it. A week later he decided to put it in commemorative cans. I brewed eight quarter barrels of beer — a lot of homebrew. I made a bock and a Scottish ale, both from kits. In those days you couldn't get liquid yeast, so I asked my friends at Coors if they would give me some yeast from their collection. I've kept that yeast culture going all these years.

I use this yeast when I make ale and lager. I just treat it differently in my mind, and I adjust the temperature during fermentation and the kind of hops I use or the kind of malt. When I call it ale, my friends believe it is an ale, and they say it is a great ale. When I say it is lager, my friends believe it is a lager, and everybody enjoys the beer. I do use ale yeast every once in a while for real authenticity and I really do lager the beer at refrigerated temperatures every once in a while when I am making that special beer or when I want to really finesse what I am doing.

To decide what to brew I usually see what I have the least of. Right now I have the least stout. I have quite a few Pilseners and light lagers and British light ales. I brew a lot of weird things, and I have to say my inspiration for brewing those things doesn't come completely from within. I'm inspired by my travels and the people I meet along the way. I get ideas just listening as well as from conversations. I take these ideas, not always directly, but somehow after a few homebrews they get twisted around and something *brewtiful* emerges.



My first experience with wheat beer and smoked beer was when I got a mysterious package in the mail back in the late 70s. A German acquaintance who had come to one of my homebrew parties sent me a sixpack of beer and among them was a Schneider Weiss and Schlenkerla Rauchbier, which I had read about in Michael Jackson's book although I had not met him at that point. I had read about these beers, but the true meaning and true flavor didn't impact me until I actually tasted one. After tasting those beers I knew I had to make something like that, especially the smoked beer. I had no idea, except for the brief mention in the now titled The New World Guide to Beer (Running Press, 1988), how this stuff was made. So I set out to make one using pale malt grains soaked and smoked over apple wood on my barbecue grill.

The idea for my first cherry beer came while drinking a homebrew. Mesmerized by the bubbles, I began thinking about the bottle of cherry wine that someone beside me was drinking and I wondered what a cherry-flavored beer would be like. So I combined the two and tasted it. The blend tasted pretty good and I wondered what it would be like to actually brew one.

I began brewing with coriander because I'd tasted the spice in Belgian ales. One thing I noticed was my coriander beers tended to maintain their freshness far longer than any of my other beers. I thought maybe there was something mysterious about coriander that preserves beer.

I had not found a reference for the preservative qualities of coriander, but when I attended the Master Brewers Association of the Americas convention a speaker from The

Netherlands talked about the technical aspects of oxidation and can linings (really technical stuff where I usually get lost). He referred to the historical use of coriander and other spices like cinnamon as antioxidants in beer. I asked him about my theory and he said coriander is not an antioxidant, but has the effect of antioxidants. Some other chemical reaction happens, helping preserve the beer. Just tiny amounts of cinnamon or coriander in the mash help reduce the effect of things like hot-side aeration or oxidation in other parts of the brewing process, and that's why my coriander beers, even those that weren't strongly flavored, tended

to remain fresh tasting for a long time. It works and it's natural.

I take homebrewing on journeys throughout the world and through my mind.



In his new house north of Boulder, Charlie is remodeling a garage to hold a walk-in cooler and complete homebrewery.

I invent beers from ideas I get from people and translate them into my own brewing style. Whether it is smoked beer or lambic-style beers, I like to put some kind of twist on beers. I usually don't brew to style. For me, knowing about styles helps me pick different elements from every style and integrate them, combine them in new ways.

There are many variations within every kind of beer and eventually a style emerges. Pilsener was not a style when it first came out, simply a different beer. People saw how great it was selling and others copied it and it emerged as a style because it was accepted in the marketplace. So with all these weird beers I am not trying to invent new styles, I am just trying to be a homebrewer, just being creative.

What is the future of homebrewing? From what I've seen around the world there are a few things I really get excited about. One is that homebrewers are realizing the brewing traditions we have as Americans. These haven't been fully discovered. Beers that were brewed 50, 60, 70, 100 years ago are part of our culture and only homebrewers are caring about and researching them right now. There has been a lot of talk recently about pre-Prohibition Pilsener, brewed with corn, but a good-tasting beer. I get excited about reviving traditions.

Second, exploring indigenous beers brewed around the world and maybe twist-

ing them to fit our culture, our taste and our time is exciting for the future of homebrewing. There is a lot to learn, new ways to brew, new recipes and formulations, new tastes to experience, all really fascinating. I see the formation of a network of homebrewers throughout the world to share our resources and experiences.

Speaking of the future, what about homebrew 2000? We should brew now for the year 2000. Now is the time to start making those prickly pear meads, strange barley wine ales or long-term lagers. Real strong stuff that can mellow out for the big celebration.

In settling into my new house I find I am referring to old issues of **Zymurgy** to learn about water treatment, wort chillers and a lot things I really didn't need to know in detail because of the way had I brewed. Now that I am changing my brewing system and using a new water source I'm having to relearn a lot.

That is my next trip, researching all those great books and articles that homebrewers have contributed to and learning another way of brewing.

In the meantime, I am still searching for new experiences. I guess I'm a restless kind of person, trying new concoctions, going to new places. I don't think the brewing will ever stop unless my curiosity stops.



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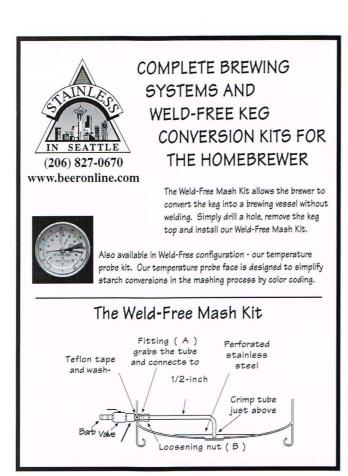
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Alan D. Eames, "The Beer King," has been a

beer and ale consultant since 1975. His most recent book is

The Secret Life of Beer (Storey Publishing, 1995). As a cultural anthropologist he has traveled to the world's most remote places

Eames

in search of beer, but does not brew his own.

Can you give a concise reason why people brew?

I'm convinced that beer was a serendipitous discovery, but there is no question that people brew beer and learn to make beer because of its mood-altering properties. No other reason.

Why do people brew at home?

Because it's fun. You know, people enjoy cooking, they enjoy the preparation. They enjoy the control over the outcome of the final potable. I think that's part of it. There is a support system now of folks who share the same interests. One's beer becomes an extension of one's self, and you can commingle with other beer fanatics.

What would you say to homebrewers?

Well, I think they have much comfort and much pride from their forebears. You know. I often look at Charlie Papazian and the impact he's had on organizing this national passion for brewing. All these "new" things have spiritual, ancestral milestones, benchmarks. I mean, to me beer is religious stuff. In all the old mythologies it was a gift from a goddess, it was given to us because we were the one group of poor dumb bastards who spent our lives knowing we would die someday. That made us anxious and a little mentally ill. So beer came into the world to give us some time out, to make life bearable. The older I get, the more I believe that's true. It wasn't until the late 1840s with Louis Pasteur that beer became a science. Prior to that it was a bigdeal mystery. It was magical stuff. So I like to see all these innovations, I'd like to see more innovations, more happiness, more passion and less pontification. To me, as an outsider looking at beer making, we should have much less of this kind of absolutism. We're talking about at least a 10,000-year-old human endeavor.

Do you think being a good historian makes a better brewer?

I think so. I think listening to vintage Sinatra will make you a better brewer, appreciating great literature and great music, having a great sex life — all those things. It's the humanity of it. The more of a humanist and the broader one's education, the less narrow, the less hormonal, the better you'll be. I mean, I think at anything. You'll sure as hell be better company.

Do you have any beer fantasies?

No, not anymore. There are times sitting in some foreign country somewhere, looking out at the sea perhaps, at twilight and the beer, one is overwhelmed with the beer and the surroundings. There is a kind of little window of ecstasy. It's just the kinds of emotions that engender that imbecilic phrase, "It just doesn't get any better than this." [Laughter] You know the feeling, it's part of the eternal. It's ecstasy, which is to be able to remove one's self from one's self — to step out of one's self. To feel harmony with the world.

Author GERRY GUREVICH is a freelance writer who recently moved to Chapel Hill, N.C., where he plans to begin brewing after moving out of a cramped apartment into his new house.

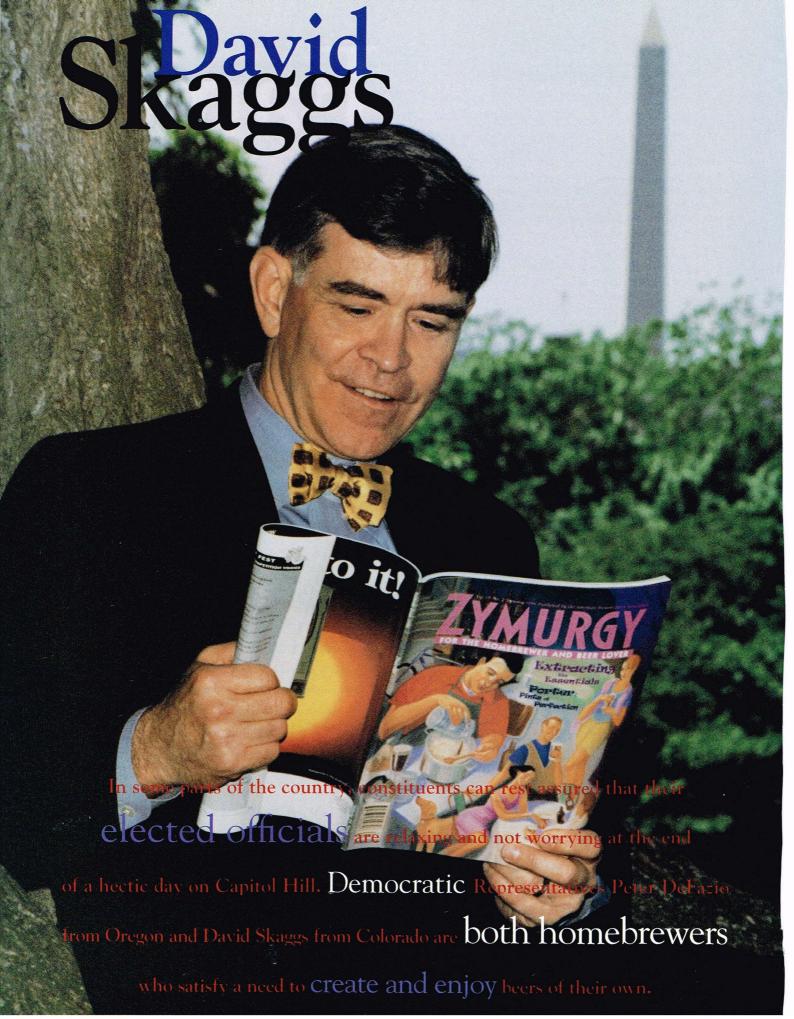
Alan Eames Pombe Ya Ndizi

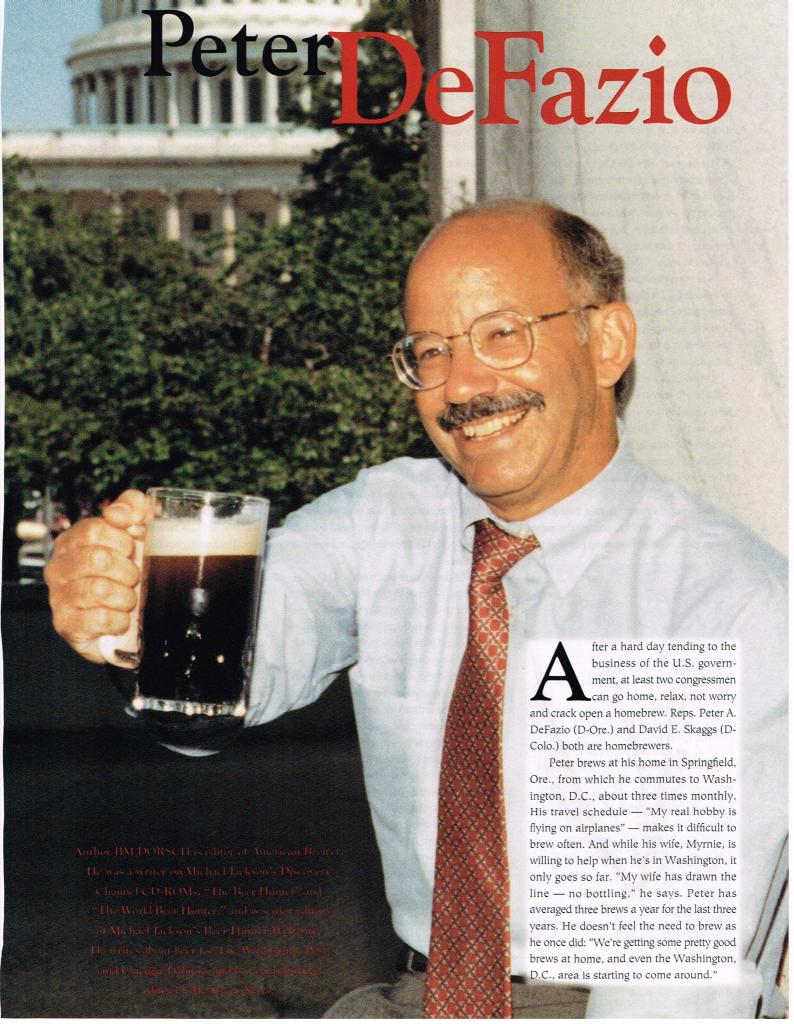
(African Bananc

1/2 gal mashed bananas (2 L)ambient yeast or a reliable ale yeast3 1/5 qt millet (3 L)

Cook mashed bananas without water. When cool, add yeast and ferment four days in a wooden vessel. Add 1 1/3 gallon (5 L) water to the mixture on the fifth day. Malt millet by spreading thinly on a damp blanket in a warm room. When sprouted, dry and grind coarsely. Mix with boiling water to form a dough. On sixth day strain banana water and slowly mix thoroughly with millet malt. Let stand until sediment settles. A day later, drink up.

Pombe Ya Ndizi should taste raisiny, cidery and fruity with some banana character, but no distinct banana flavor. The color varies with regional ingredients — from milky white to pale blue to green.





David started brewing about three years ago and has made four or five batches so far. He brews at his home in the Washington area, but says his work doesn't allow him to brew as often as he'd like. He was halfway through a batch of honey brown ale he brewed over the Christmas holiday when interviewed for this article. His wife, Laura, isn't as enthusiastic about beer and brewing as Myrnie DeFazio is, although she does cook with beer. But when it comes to brewing, "I stay out of my wife's way, and she out of mine," David says.

A congressional staffer introduced David to the hobby. Laura then gave him a homebrew kit for Christmas. David enjoys homebrewing, saying, "I like to make something. My job has a lot of inputs and few measurable outputs."

David and Peter learned to love beer in different ways. David discovered what beer could be on a springtime trip to Europe in 1977. "I hadn't experienced anything other than light American stuff," he recalls. "I can remember vividly being at a beer hall in Prague and thinking, 'This is really good.'"

Peter's mother came from a Boston-area brewing family, and his uncle, who raised his mother, regaled his young nephew with

Peter DeFazio's Basic Ale

Ingredients for 5 gal (19 L)

- 3 1/2 lb Cooper's amber malt extract (1.6 kg)
 - 3 lb Munton and Fison dry malt extract (1.4 kg)
- 1/2 lb crystal malt (227 g)
 - 1 oz Cascade hops (28 g) (boil)
- 1/2 oz Fuggles hops (14 g) (finish)
 - 1 package Cooper's ale yeast

Bring 1 1/2 gallons (5.7 L) of water to a boil with gypsum and crystal malt. Remove crystal malt when boil commences. Add malt extract, dry malt, Cascade hops and boil for one hour. Add Fuggles hops, boil for five minutes. Strain into fermenter and rinse hops with water. Add cold water to bring to five gallons (19 L). After cooling wort to room temperature, add yeast.

stories of the brewery, which closed forever with the dawn of Prohibition. In college in the late 1960s, Peter and his friends drank imported beer. Then, "In the 1980s microbrews popped up." Peter started brewing around that time, although he had flirted with fermentation in the past. "I tried to make wine in college," he recalls. "It was a disaster."

Peter says he and his wife "have gone around the world on beer." They once took a trip around the planet, drinking beer

instead of water to avoid illness in undeveloped countries. And some of the beer wasn't half bad. "In Calcutta I had a beer — I think it was called Guru. It was good beer," Peter says.

Peter is a familiar figure in beer circles in his brewery-rich home district, which

includes hometown Springfield as well as Eugene. "He comes in here every now and then," says David Sohigian, head brewer at Oregon Fields Brewing Co., a brewpub in Eugene.

David doesn't see much of the D.C.-area brewpubs. "I have pretty long days, then it's home to the family." But when in a new town he checks for local products. Living in Boulder, and with family in the Seattle area, David is no stranger to good brew.

Neither congressman has invested much in brewing equipment. For example, David brews on the kitchen stove and ferments in a plastic fermenter and a carboy in the basement. He gets recipes from Charlie Papazian's *The Complete Joy of Home Brewing* (Avon, 1984) and the newsletter of Brew America in Vienna, Va., where he buys supplies. David is just another customer at Brew America. No one knows his occupation. "I'm just a guy. I try not to shave before I go," he says wryly.

Peter buys supplies at the Home Fermenter Center in Eugene. "I like Cooper's malt, some British malts and I use a lot of Northwest hops like Cascade, Willamette and Mount Hood. My wife and I tend to like

hoppy ales," he says. Peter's homebrewing hobby "helps humanize me to people in the homebrew store."

Although he describes himself as a detail man, Peter admits he hasn't developed the habit of taking notes on brewing. "I've never paid a lot of attention to recipes. I never write down what I do," he says.

Neither does David. But he pays attention to the basics. "I really do follow mandates for sterility and cleanliness as hard as I can," he says. This is only natural —

Peter A. DeFazio and David E. Skaggs were first elected to Congress in 1986.

Peter DeFazio advocates a balanced budget and has repeatedly opposed congressional pay raises, to the point that he has turned back raises totaling

more than \$90,000. He serves on the House Resources Committee and the Transportation and Infrastructure Committee.

David Skaggs is a member of the House Appropriations Committee and the House Permanent Select Committee on Intelligence. He campaigns for affordable education, supports a balanced budget, works to protect the environment and is pro-choice.

there's nothing like a mandate to stir the blood of a politician.

David says, "I never do the same thing twice. I'm leaning toward the dark side." Of beer styles, that is — David isn't practicing dark arts in his homebrewery, but he likes to experiment freely rather than take a methodical approach. "Brewing for me is a bit experimental," he says. David improvised to make his honey brown ale, "adding honey on my own to a standard brown ale."

Put in front of a brewpot, congressmen are pretty much like everybody else. They suffer from the bonehead moves that stifle all homebrewers from time to time.

"I once had a stuck fermentation," recalls Peter. "It was too cold, so I moved the fermenter by a wood stove. I forgot about it, it got too hot and killed everything. That batch fed the slugs. There are gourmet slugs hanging around my house. And they can drink a lot."

David is proud to say he's had "no explosions," and has even rescued a batch. "The yeast didn't take in one batch," he says, "I was able to open the fermenter up and throw in another packet of yeast. It fermented fine after that." Despite this mi-

nor victory, he realizes he's just a beginner. Pressed for tips, the congressman says, "I'm a tip receiver, not a tip giver." Peter has one tip: "I've learned to be fastidious about cleanliness."

Both congressmen are concerned about the federal government's stance on alcohol issues, including excessive restrictions on sales and questionable assertions about the effects of moderate consumption on health. On the threat of neo-Prohibition, David says, "I think we've gotten past that," citing recent medical reports on the benefits of consumption of dark beer.

But Peter notes that anti-alcohol forces are "always kind of percolating out there." A gerontologist, he credits exercise and beer drinking — in moderation, of course — for his phenomenally healthy ratio of "good" to "bad" cholesterol.

Peter says, "A few years ago I got involved with BATF (Bureau of Alcohol, Tobacco and Firearms) on behalf of Bert Grant (Yakima Brewing and Malting Co., Yakima, Wash.). It was so bizarre that he was not allowed to put the nutritional content on the label [of Grant's Scottish Ale]." The problem is a difference in perspective, he says: "I say beer is food. BATF says beer is bad." Peter says, "I'd like to see BATF loosen up on label requirements rather than nit-picking about labels and nutrition labeling." He is opposed to increases in the beer excise tax, saying, "I don't think we should try to balance the budget with beer taxes. It's not the place to go."

Homebrewing seems to come naturally to Peter's office. "Four people on my staff were brewing at one point. Now it's down to two," he says. Still, a bottle of homebrew sometimes appears in the office at the end of a long day. "A couple of homebrews does wonders for national policy," jokes Peter.

Do the congressmen adhere to Association of Brewers President Charlie Papazian's maxim to relax and not worry? Absolutely. "My first batch included viewing Charlie's video, 'Homebrew with Charlie Papazian,' and 'relax, don't worry' became one of our standard household sayings," David says.

Neither David nor Peter could explain why two Democrats in the House are home-

brewers, while it appears that no Republicans practice the art. "Republicans are more into hard liquor and cheap beer," says Peter. From a more nonpartisan viewpoint, Peter believes an organization might be in the offing: "I think perhaps David and I should put together a beer drinkers' caucus."

David believes his colleagues' appreciation of beer is "a little above average." Still, it's not always easy to find acceptable suds on the congressional circuit. "Some receptions might just have Miller

Lite and Miller. In that case I drink soda water," Peter says.

When all is said and done, it's the satisfaction of homebrewing that drives these two congressmen to continue pursuing the hobby, even if it's not as often as they'd like. "Homebrewing gives me a great sense of accomplishment. It's a product I can be proud of," says Peter. David sums it up, saying, "The sound of popping the top on a bottle of beer I made is very satisfying."

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Homebrewer Jerry Carter, a native Texan, sells oil-field equipment and supplies by day, but in his spare time the Wild Man gets his fix of adrenaline-pumping activities by driving a '74 Plymouth Barracuda drag race car.

Author MIKE SEIDENSTICKER (76251.2520@compuserve.com) has been a foaming-at-the-mouth homebrewer since 1982 and is a BJCP Recognized judge. He founded the Borderline Brewers Homebrew Club in El Paso, Texas, in 1991, and teaches short courses in homebrewing through UTEP's Continuing Education program. Mike holds a Ph.D. in geology and he pays for his homebrewing addiction as an environmental consultant. His most remote (and most satisfying) homebrew, a "thick, black and nasty megastout," was fermented in and served from a big plastic water jug in the wilds of northern Alaska's Brooks Range during a 10-week geological field expedition.

ust after coffee, I strapped on my sunglasses and drove into the early morning sun, leaving El Paso, Texas, to follow an interstate highway trail that would transport me to the address of Jerry Carter, a homebrewer who lives in the West Texas town of Odessa. The distance from my homebrewery to Jerry's is almost exactly three hundred miles; the terrain in between is stark, sparsely populated semiarid desert, covered mostly with rock and sand and lesser amounts of cactus and mesquite.

A couple of hours into the drive, the mountainous basin-andrange topography of my part of the state gives way abruptly to a flat, immense and virtually featureless tract of Texas known as the Permian Basin. The change in topography is accompanied by the appearance of oil-well pumps, lots of them, oscillating like giant rocking horses, extracting the petroleum that almost single handedly drives the Permian Basin's economy.

When I arrived at Jerry's I encountered two smiling fellows kicked back in side-by-side lawn chairs, looking for all the world like the pilot and copilot of a massive two-burner propane stove on which a big stainless-steel kettle was gently steaming.

"Is one of you Jerry Carter, the famous race-car driver?" I asked as I strolled through the open door of the garage.

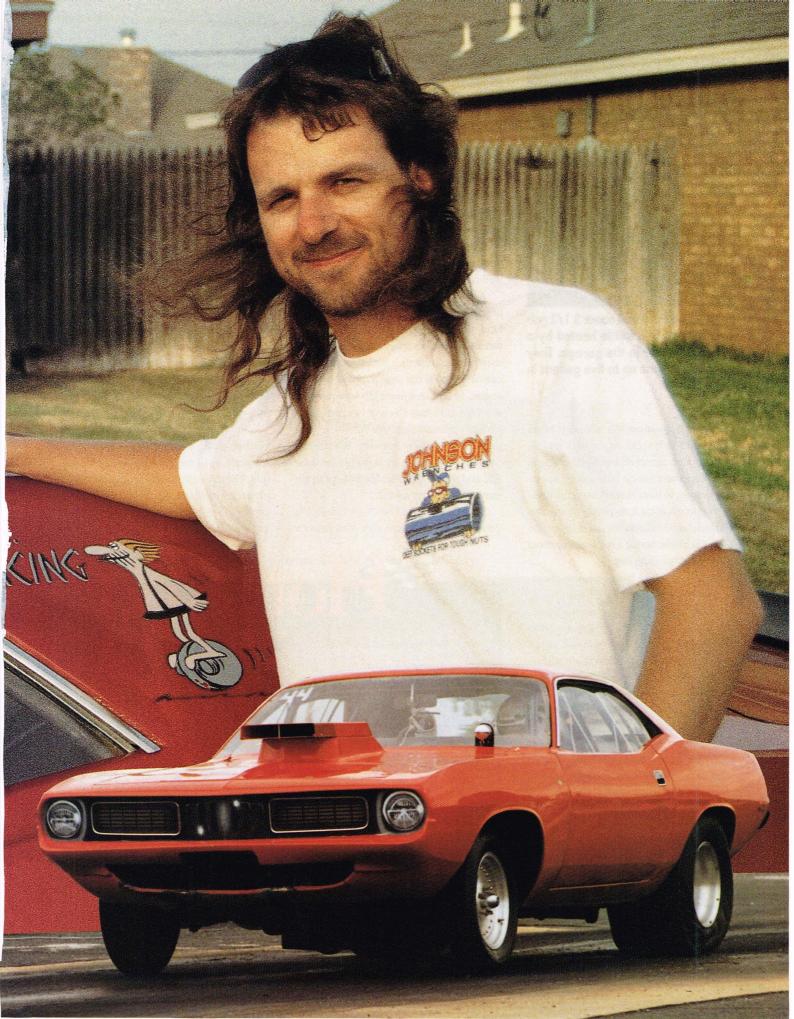
"That's Jerry," one of the brewers told me, pointing at the other as they both stood to greet me. "I'm his brother, Johnny." Johnny is the older and slightly more talkative of the two; both are native Odessans, endowed with piercing eyes that during conversation lock onto your own like a laser.

It wasn't long before I was offered a glass of cool, refreshing Munich-style helles lager drawn from a refrigerated Cornelius keg inside the house. With the first swallow, I was glad I had made the trip. The deep malt character of the full-bodied lager was luscious and wonderfully balanced with "noble-type" hops; the fermentation characteristics were clean and crisp, making for a welcome thirst-quenching delight at the end of my dusty trail.

"We used Tetts and Hallertauers early in the boil and Saaz toward the end," Johnny told me. By the time I had finished that glass of beer, I knew I had acquired some good friends and would be searching for excuses to visit again in the future.

During the week, Jerry earns his living as a mild-mannered salesman of oil-field equipment and supplies. But during his off hours, he is known to friends and associates as the "Wild Man." Jerry's nickname reflects the nature of the things he likes to do for fun — drag racing, sky diving, bungee jumping and wilderness backpacking. "I'm an adrenaline junkie," Jerry confided. I wondered aloud if the function of homebrewing in the Wild Man's life might be to counteract the adrenaline? "Maybe so," he said.

I've never heard the saying that "brothers who brew together race together," but if there were such a saying it could be aptly applied to the Carter brothers, because they also share a passion for the excitement of drag racing. Johnny is the B.C. Racing Team's chief mechanic and half owner of their race car, while Jerry is in charge of driving the "Chevy Eater" to victory. The car is a '74 Plymouth Barracuda, powered by a 440-cubic-inch gasoline-burning V-8 engine.





Johnny and Jerry boil about 2 1/2 gallons of wort in a kettle heated by a propane burner in the garage. They bring the volume up to five gallons in the fermenter.

Because it is a race car, it is, of course, bright red. The 15-inch slicks on the back and ultralow ground clearance, among other things, make it apparent this car is designed for a single purpose: to burn rubber down the quarter-mile length of track as quickly as possible. The red Barracuda gets the job done in 10.6 to 10.7 seconds, hitting a top speed of about 130 mph at the finish line.

Jerry assured me the experience of controlling this wild ride is extremely thrilling and highly addictive, but also very hot. The interior cabin temperature on a summer day in West Texas can exceed 120 degrees F (49 degrees C), which is rough duty when you are decked out in racing jacket and helmet. Needless to say, there is nothing more satisfying at the end of a racing day than a glass or two of refreshing homebrew.

The Carter brothers began homebrewing about four years ago after they ran across an advertisement from a mail-order homebrew-supply company in an issue of *Popular Science*. They ordered a kit, followed the directions and enjoyed the results so much they've never turned back to commercial beer. That first brew was made from extract with a pound or two of specialty malt and additions of aromatic hops, and fermented with a liquid yeast culture.

"It had just never occurred to us that you could make great beer at home until we saw

that magazine ad," said Jerry. "We found homebrewing to be fun and rewarding. The most interesting aspect for us was learning about and experimenting with all of the different variables in ingredients and techniques that affect the final result."

Before long, the Carter brothers were brewing a couple of times a month and had been summarily banished from the kitchen to the garage after warping the range top during a long boil. Although their tastes lean toward the darker beer styles, especially bocks and porters, their homebrewing has pretty well covered the full gamut of styles.

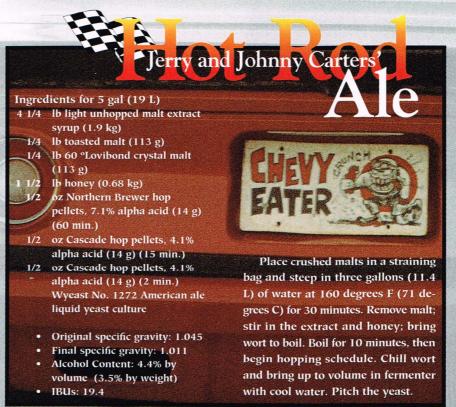
As Jerry explained, "We've never exactly repeated a recipe. Homebrewing for us is kind of like drag racing in that sense. Motorheads are never really satisfied with what they've got, no matter how good it is. We can never resist the urge to tinker with the engine, or try out a new high-tech part and see if we can't make the car run just a little bit faster the next time. We follow the same procedure with homebrewing. We study it carefully, try to learn what makes the thing tick and then apply that knowledge to get increasingly better results."

In their quest for brewing wisdom, the Carters eventually discovered the existence

of the American Homebrewers Association and their local homebrew club, the Midland-Odessa Basin Brewers. "We went to a meeting last spring and were delighted to find other folks who shared our interest," Johnny said. "A lot of the members have been brewing for much longer than we have and are eager to share their experience with novices like ourselves, and our own brewing has benefited tremendously as a result."

The Carter brothers have stuck with their initial approach of extract-based recipes augmented with specialty malts. They now favor working with unhopped extracts, which allow them the satisfaction of complete control over the hop character of their brews. Lately they've been using about a pound and a half of locally produced honey in many of their brews. All-grain brewing, they say, looks like fun, but with their already hectic lives they simply can't make the time investment that is required.

The Carters make five-gallon (19-L) batches, using a refrigerator to control the temperature of the double-stage fermentation. They've replaced their original plastic primary fermenter with an oversized glass carboy. They tend to bottle their ales and keg their lagers, mainly because it is easier





After chilling the wort in the kitchen sink, Johnny pours it through a strainer into the primary fermenter.

to do the lagering in bulk. Their ales are bottle conditioned and their lagers are force carbonated in the keg.

Their fellow club members emphasized the importance of minimizing lag time by rapidly chilling the wort after the boil and recommended using a wort chiller. The Carters, though, say they were nervous about keeping a wort chiller, whether the immersion or counterflow variety, clean and sanitized, so they experimented and found that placing the kettle in the kitchen sink filled with ice produced a satisfactory result.

Another tip the Carter brothers are eager to pass on is the use of self-adhesive, flexible, liquid-crystal thermometers. "We've got one stuck on each of our fermenters, because one of the things we've learned is how important temperature control is to a successful fermentation. They're nice because they give you



The Carter brothers share their passions for homebrewing and drag racing.

an accurate measurement of the temperature of the liquid inside the vessel without having to open it up to insert a potentially contaminated thermometer," said Johnny.

Last June, the Carters recognized an entrepreneurial opportunity and began operating a homebrew supply business from their homes. This remains a small-scale, part-time operation that is promoted largely by word of mouth and patronized mostly by club members. The venture gives the Carters an enviable opportunity to earn some income

from a hobby, just like they do when they win a drag race on the weekend, and it helps satisfy their desire to improve their craft by enabling easier access to the highest quality and freshest ingredients.

The Carters left me with the recipe for the American-style pale ale they were brewing during my visit. The fresh wort smelled and tasted great and shows every promise of producing another excellent beer. Their racing car inspired the beer's name.

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Tomas Segebladh

With an eye for good brewery design and a taste for Quality beer,

Tomas Segebladh of Stockholm, Sweden, enjoys every aspect of his hobby.

Author MARK MOYLAN is a freelance writer in Michigan who has been homebrewing for 10 years and is interested in all things fungi. He makes a good glass of beer, bakes a fine loaf of bread and has been spotted attempting the fine art of composting. He looks forward to the day when alchemy takes its rightful place again as the most important science.

HOMEBREWERY

he Swedes are noted for their craftsmanship, their technological skill and the high quality of their finished goods."

Martin Hintz — Enchantment of the World: Sweden (Childrens Press, 1985)

Tomas Segebladh's first foray into homebrewing was a batch of extract beer. "Without success," he says. Then, in one of Stockholm's daily newspapers, he saw an article on all-malt

holm's daily newspapers, he saw an article on all-malt brewing with recipes, and Tomas brewed a batch in his kitchen. The beer was a success. That was about five years ago.

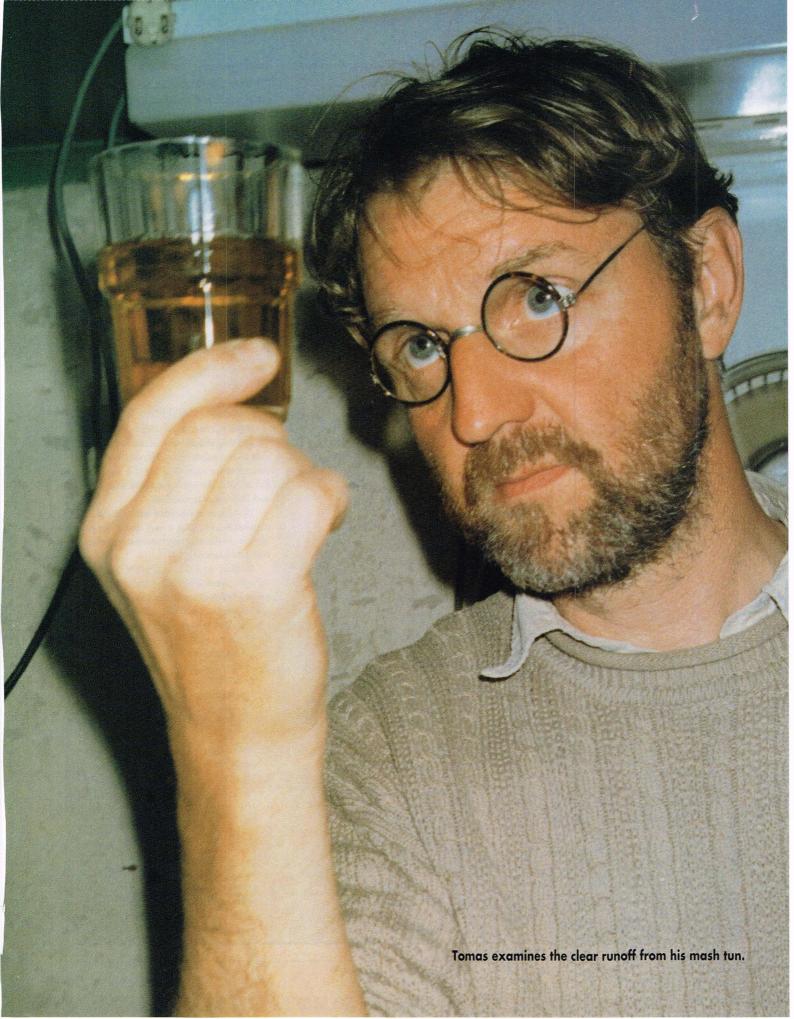
Today, 20,000 to 30,000 Swedish kronor (\$4,000 to \$5,000) later, Tomas usually brews a 33- to 36-gallon (125- to 136-L) batch of different lagers and ales with his friends every month. His brewing setup in the basement of his parents home just 300 meters from his house in a northern suburb of Stockholm, can brew up to 36 gallons (136 L) of beer in one session. And like any good homebrewer, his system is a reflection of himself.

Sophisticated and sturdy, Tomas' homebrewery is a conglomeration of the old and new in a solid design. His present system was built with an eye on duplication, one that could be fabricated again by someone else. The three-tier system includes a combination mash/lauter tun kept at a constant temperature with a heating jacket he made from six heat shields bought from a hot water tank manufacturer. The shields give him precise temperature control when mashing.

Following mashing, Tomas uses a pump to recirculate wort from the bottom of the mash tun over the top of the grains. The pump

takes about five to 10 minutes to recirculate five to eight gallons (20 to 30 L), of wort which is the usual time for the wort to clear. Then he sparges to collect 33 gallons (125 L) of sweet wort in the 40-gallon (150-L) stainless-steel kettle. The kettle is fitted with a false bottom about one-half inch from the bottom and is perforated with one-millimeter slots. This screen catches most of the trub when the cooled wort is pumped into the primary. A pump is used because the boiler sits close to the floor and gravity feed isn't possible.

Boiling the wort is accomplished with an immersion heater Tomas bought from a manufacturer. Cooling the hot wort is done using a heat exchanger originally designed for the dairy industry. Cold water flows through one side and the hot wort through the other side. Built of stainless steel, the plated exchanger drops the temperature to 50 degrees F (10 degrees C), the temperature of his tap water. The



pump runs the wort through the exchanger at a rate of 1.8 gallons (7 L) per minute.

Tomas ferments in a stainless-steel tank he had made to fit inside one of three brewing refrigerators. A second refrigerator holds five seven-gallon (27-L) rectangular stainless-steel lager tanks he picked up as army surplus (that's the Swedish Army) and a third smaller refrigerator stores his yeast. After lagering, the beer goes into seven or eight

Cornelius kegs and is force carbonated. Then it's ready for drinking.

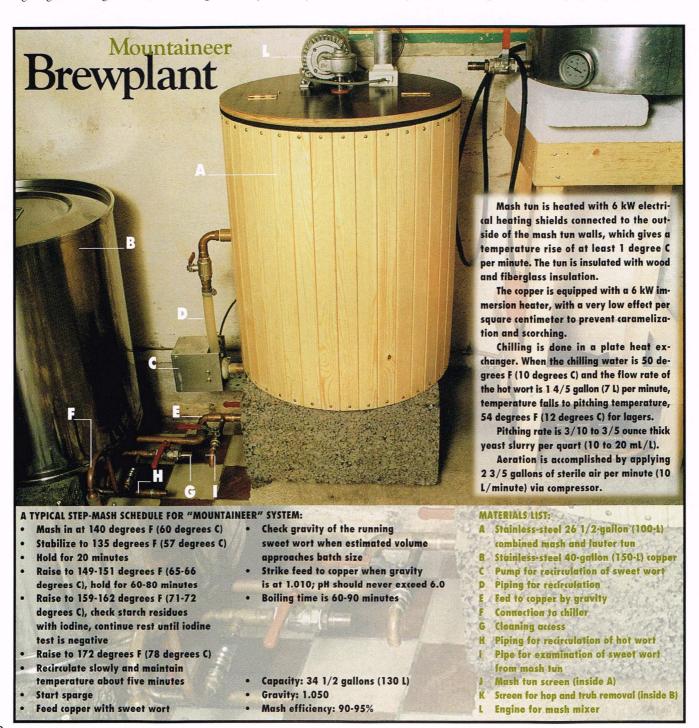
"Swedes like to party."

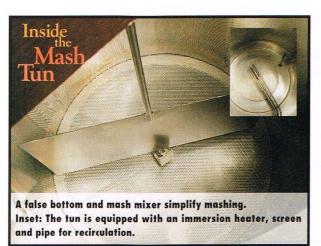
Martin Hintz — Enchantment of the World: Sweden (Childrens Press, 1985)

The reasons Tomas started homebrewing are not too different from those of U.S. homebrewers. "I like the techniques, I like beer and I like people who like beer," he says. "Plus you can make beer you can't

find." Good beer is available in Sweden from the state-run stores, but with Tomas' interest in good food and cooking, the chance to make very good beer appealed to him.

"I like to drink beer alone," he said at one point of the conversation and I conjured image of him locked away in the cellar while his wife Eva and his three daughters, Fanny, Clara and three-year-old Alice are pounding on the door crying "Papa, Papa, please





come out!" and Tomas replying, "No, I can't, I am drinking beer!" (Of course the conversation was in Swedish so I didn't understand a word of it. My, how the mind plays funny tricks.) I related this image to him and he said with a laugh, "No, I don't like to eat food when I'm drinking beer."

A freelance photographer for the last 10 years, Tomas is in the process of changing careers and pursuing a job with a publishing firm in Stockholm. "Photography is now one of my hobbies along with homebrewing and fly fishing," he says. He helps friends build their own brewing systems and touts homebrewing to all who will listen. "My mission is to try to get people to understand what good beer is."

His timing is right because the Swedish government relaxed the laws on imports a

few years back. "You couldn't import beer that was stronger than 4.5 percent alcohol by weight — it was forbidden." Budweiser and Samuel Adams are available, but Tomas finds the lack of English ales disheartening. "I like good English ales."

His May Snow Pilsener, named for a late dusting of the white stuff when he brewed it, is quite close to his dream beer. "A light,

medium-bodied pale lager, balanced with a hoppy nose," he says.

So does Tomas drink a barrel of beer every month or two? "No," he says. "When I brew I usually invite some friends to brew and we make a deal. I don't consume everything by myself."

Tomas' brew sessions last about eight hours and that doesn't include crushing the grain. He buys malted barley from a local supplier and it comes precrushed. He says the Swedish-grown barley is top quality, a bit lighter than English pale and probably closer to American two-row. The only drawback is that sometimes the crush varies, affecting his yield. Brewing with the local tap water, he treats his mash and sparge water with gypsum and table salt

Snow Pilsener

Mash in at 140 degrees F (60 degrees C) and raise temperature to 149 to 151 degrees F (65 to 66 degrees C) for 80 minutes. Raise to 160 degrees F (71 degrees C) for 20 minutes. Raise to 167 degrees F (75 degrees C) until full conversion. Raise to 172 degrees F (78 degrees C) and recirculate until clear. Rest for 10 to 15 minutes. Sparge with 18.5 gallons (70 L) 167- to 176-degree-F (75- to 80-degree-C) water. Aerate chilled wort with filtered air for 30 minutes, skimming off foam. Ferment at 46 to 50 degrees F (8 to 10 degrees C) for 10 to 12 days. Lager four to six weeks at 37 to 41 degrees F (3 to 5 degrees C). Force carbonate.

Tomas Tomas Company Company

Ingredients for 33 gal (125 L)

36 lb pale malt (16.2 kg)

3/4 lb raw wheat (0.35 kg)

1 1/2 lb dark caramel malt (0.7 kg)

1/3 lb roasted barley (0.15 kg)

3 1/3 lb white sugar (1.5 kg)

3 1/2 oz Northern Brewer hops, LEBORG 3 7.7% alpha acid (100 g) (60 min.)

6 oz Fuggles hops, 4% alpha acid

SWEDEN

3 1/2 oz Goldings hop pellets, 5.5% alpha acid (100 g) (10 min.)

1/10 oz Goldings hop pellets per Avesta 5 gallons, 5.5% alpha acid (3 g) (dry)

2 tsp Irish moss per 5.3 gal (20 L) (10 mL) (10 min.) Vaster Wyeast No. 1968 London ESB

(slurry liquid yeast culture from 24-liter batch)

Original specific gravity: 1.044

Final specific gravity: 1.009

• Total IBUs: 30

GOTEBORG Brew partner: Nisse Wiberg

Mash in at 131 degrees F (55 degrees C) for 30 minutes. Raise to 149 degrees F (65 degrees C) for 75 minutes. Raise to 162 degrees F (72 degrees C) until full conversion. Test for conversion with iodine. Raise to 172 degrees F (78 degrees C) and recirculate until clear. Rest for 10 to 15 minutes. Sparge with 26 to 32 gallons (100 to 120 L) of 167- to 176-degree-F (75- to 80-degree C) water

for ales. He uses lactic acid, calcium chloride and sometimes charcoal for lagers.

One technique he devised to remove trub is to aerate his wort for 30 minutes with filtered air before pitching. A gummy foam collects on top, which he skims off with a sanitized spoon. Reusing yeast slurry whenever possible for subsequent batches because of the amount of yeast he needs to brew, Tomas is a stickler for sanitation. "If you want to make good beer, your sanitation has to be very good," he says. Tomas confided with a bit of shame that he uses bleach even though chlorine products are frowned on by the environmentally conscious Swedes. A friend who works at one of Stockholm's major hospitals helps him

Ingredients for 28 gal (105 L)

40 lb pale malt (18 kg)

6 1/3 oz Hallertauer hop pellets 5.5% alpha acid (180 g) (60 min.)

3 1/2 oz Saaz hops, 1.8% alpha acid (100 g) (20 min.)

3 1/2 oz Tettnanger hop pellets, 3.9% alpha acid (100 g) (five min.)

7/10 oz Hallertauer hop pellets, 5.5% alpha acid (20 g) (five min.)

2 tsp Irish moss per 5.3 gal (20 L) (10mL) (10 min.)

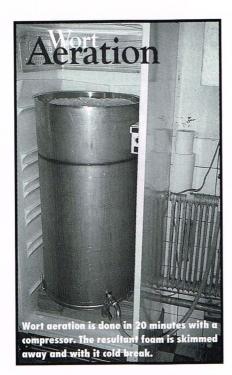
3/10 oz Yeast Lab Pilsener lager (10 mL) slurry per liter of wort

• Original specific gravity: 1.048

· Final specific gravity: varies

• Total IBUs: 33

· Brew partner: Svante Ekelin



look after his yeast. Regardless, he changes yeast after five brewing sessions.

"In the visual arts, the Swedes are noted for design and form. Many of their art objects are functional, meaning they can be useful as well as providing visual enjoyment." Martin Hintz — Enchantment of the World: Sweden (Childrens Press, 1985)

Talking with Tomas about homebrewing is fun for a number of reasons. First, he speaks English quite well. Second, he likes good beers and he likes brewing beer. There is a sense of pride in his voice when he talks about his rig and the beer he brews with it that you learn to recognize among home-



A peek inside the wood-insulated mash tun.

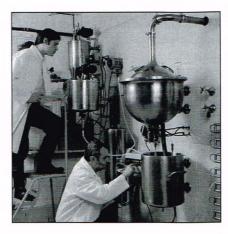
brewers. And he's making good beer. Beer he enjoys sharing with friends. Having put himself to the task of building the best homebrewing system he is capable of, he can draw off a cool May Snow Pilsener with his buddies, lean back and toast a job well done.

Do they raise their glasses and shout "Skoal!" the only bit of the Nordic culture we all seem to be familiar with besides visions of mead-swilling Vikings and sultry blondes? "Well, we say it," he says, "but it's more of a joke than a serious toast."

Silly toasts aside, after talking with Tomas I think the beer he makes does the talking. Though my Swedish is not very good, I bet that after the first sip the words that come to mind are simply, "If this beer makes you happy, then I'm happy." Homebrewers are like that, whether you're in California, Michigan, England, or surrounded by pleasant fiords near the Baltic Sea. It's the homebrew talking.

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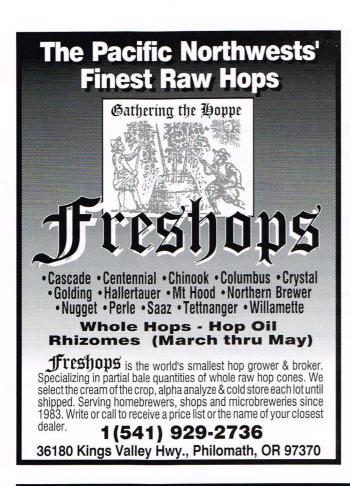


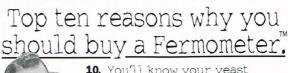
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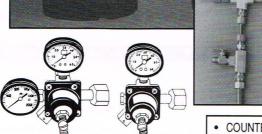
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Michael Jackson is the world's leading authority on beer and whiskey, a writer of keen insight and

literary excellence. I've known Michael for more than six years and his passion for beer and journalism has been a particular inspiration.

What was your first brewing experience?

My interest in beer was aroused by my tastings of the various local brews in Yorkshire when I was a teen-ager. I did not come into the beer movement as a homebrewer. I have occasionally helped in brews with clubs, notably BURP (Brewers United for Real Potables) with the late Phil Angerhoffer, but don't brew on my own. When people ask why I don't homebrew, I have a stock answer: (a) I am never home; (b) I have four fridges containing at any one time about 300 beers waiting to be tasted. Samples arrive twice daily, by FedEx and UPS, from brewers around the world.

Do you have any hobbies?

I spend most of my life traveling to sample beer and whiskey, and writing, broadcasting and lecturing on these themes. Although I greatly enjoy these activities, they constitute a job, not a hobby. I have no hobbies, but greatly enjoy drinking for pleasure (beer and whiskey), wine and food, reading (especially journalism), following politics, jazz, theater, movies, watching boxing and professional rugby league. The latter is a particular passion.

What is your greatest beer-tasting recollection?

My first Trappist beer in about 1964? Getting drunk on 21-year-old Chimay in the monastery in the 1980s? Sahti with smoked eggs after a real sauna in rural Finland? Smoked porter, bagels and lox for breakfast on an ice field in Alaska? Cask-conditioned stout in the mountain city of Kandy, Sri Lanka?

What was your worst beer-drinking experience?

Cold keg ale at a rugby league game (my team was beaten). Warm lager at a tractor pull (I had no allegiance).

What is the weirdest question you've ever been asked about beer?

A vegetarian wanted to know which cask ales are innocent of fish-based finings.

What role, if any, did homebrewing play in the development of the craft-beer industry?

Homebrewers are the front-line troops of the beer revolution.

What do you perceive to be the greatest threat to the craft-brewing industry?

That it becomes so fashionable as to be ephemeral, but I don't think that will happen. The movement is not helped by the misuse of terms like microbrewery, hand-crafted, unique ...

What sort of beers are in your refrigerator right now?

Three hundred, from lupin ale to oyster stout, and several homebrews.

Where is your favorite place to enjoy a beer?

My local pub, which serves Fullers. I deserted my previous local of 25 years — a Young's pub — when they "refurbished" it.

Any suggestions or tips for the homebrewer?

I always try to taste people's homebrews, but I do find it difficult to carry them around when I'm on the road. Just pour me a quick sample, here and now.

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toward homebrewing.

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We asked Celebrator Beer New

publisher TOM DALLDORF to

interview some of the best-

cnown figures in brewing about

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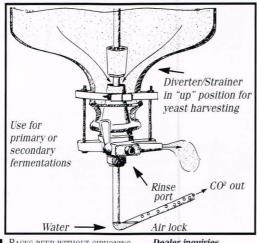
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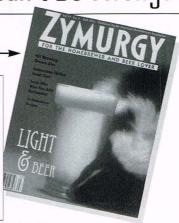
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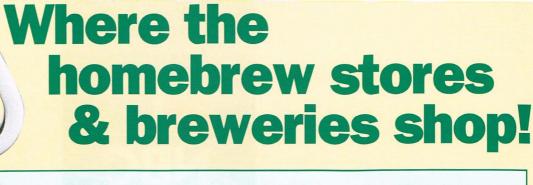
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ent to find out why Peter Sidari homebrews, the question quickly became how on earth he homebrews. Peter Sidari is an engineer who works with NBC Sports mobile units covering golf, basketball, football and the Olympics. He's on the road

more than 240 days a year. He has a wife and two kids, with a third on the way. He has another hobby, woodcarving, which he has turned into a profitable sideline making gold-leaf signs. He's an avid birdwatcher, too. You think you have problems fitting a batch of IPA into a weekend? Don't flatter yourself!

Peter lives in West Pittston, Pa., a green neighborhood tucked between Wilkes Barre and Scranton. He lives with his wife Patty, 9 1/2-year-old daughter Jenny and nine-month-old son Peter in a neatly kept house about 100 yards from the Susquehanna River.

"Yep, we're right across the river from Cooper's Waterfront, great beer selection there. Once my brother-in-law and I took the kayak down, dropped it in the water, paddled across and had a few," Peter says. That's the kind of time-saver that lets him fit everything he likes into his busy life.

Luck played an early role in Peter's career choice. In his senior year as a communications

major at the University of Scranton he got an internship with a local television station, WNEP. After a year they offered him a permanent position. He began working more and more with NEP, a branch of the station that contracted remote broadcast units: truck-

loads of television equipment to create a fully functioning studio anywhere in the country.

Then he jumped to NBC Sports — the big time. Oddly enough, some years later, he is now back with NEP Mobile Production Services, a spinoff of his original employer, the second largest remote broadcast services company in the country. NBC Sports contracts all their remote coverage through NEP.

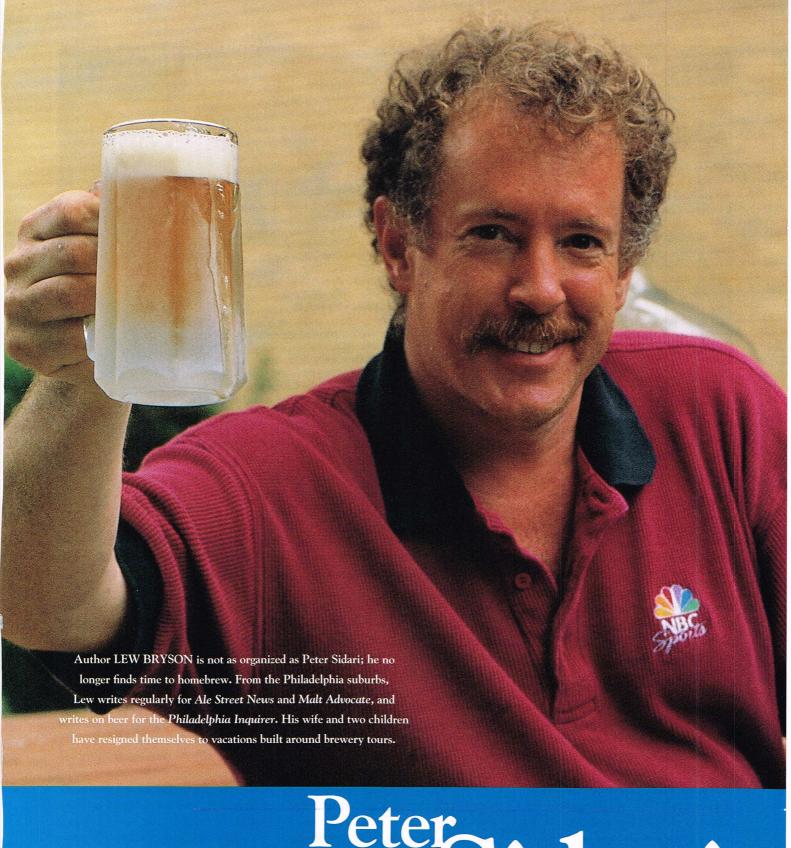
"I'm on the road more than 240 days a year," Peter explains. "I just got my millionth-mile leather baggage tag from USAir!" Some seasons are more demanding than others. "Basketball or football is a three-day weekend. The setup is a lot simpler. Golf, now . . . golf is 22 weeks a year, six to seven days each event. It's a lot more involved: more cameras, cables running 3,000 feet through trees and brush. We set up, we shoot cable coverage, we shoot NBC's coverage, we tear down, we drive to the next one."

Naturally, all this travel presents the beer lover with opportunities Peter grabs one pint at



Peter Sidari packs a number of passions into his busy life as an

NBC Sports technician — one hobby is homebrewing.



Peter Sidari



Peter shows off his collection of homebrewing gear: four five-gallon carboys, two seven-gallon carboys, 10-gallon stainless-steel kettle, kegs, regulators and more. He keeps all this in the "dungeon" along with his woodcarving equipment.

a time. "Oh, do I ever!" he beams. "I'm a birdwatcher, my life list is over 2,000 because of the travel. I do the same for beer; my life list is only up to about 1,500 on those." His favorite pub on the road — so far — is Brit's in Minneapolis. "They have about eight British drafts, real British food, some excellent Scotch eggs! And they're just great people. I like going back there," Peter says.

What does Peter do to earn such great fringe benefits? "I'm a field engineer. We arrive in two tractor-trailers about a week before an event. They're each packed with about \$3 or \$4 million of equipment. We set up power and lay cables to the remote

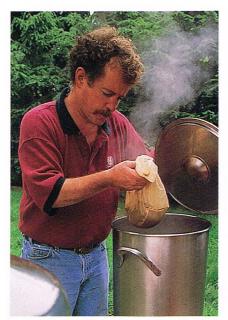
cameras, then interconnect everything. The two trucks will be production, editing and audio/video," Peter says. It's not just him either. "We're getting ready for the U.S. Open right now. We'll be taking a staff of 201."

It may seem odd to go from such an anthill of bustling activity to homebrewing, an often solitary activity. "It's my chance to unwind," says Peter, echoing many a gardener and fly tier. "When the housework's done, and I've had some time with Patty and the kids, I go downstairs to brew." It's often 9 at night before he gets down to what Patty calls the dungeon: a basement space devoted to woodcarving and homebrewing.

That's a key to Peter's ability to homebrew in such a restricted schedule. "What would I tell someone who wants to homebrew but doesn't think they have the time? You can do it anytime," he says with a smile. "It doesn't have to be on a Saturday afternoon. Three hours of watching TV could be three hours of brewing time. You just have to be a bit more free about it."

Conversely, the other key to Peter's successful integration of homebrewing into his busy life is careful planning and forethought. "Because my time is so limited, I lay things out before I start. Then as I brew, I clean in parallel as much as possible. I can do a

"Three hours of watching TV could be three hours of brewing time. You just have to be a bit more free about it."



Peter has found adding specialty grains to his recipes gives his beers added dimension without adding much time to his homebrewing sessions.

complete extract brew with specialty grains, start to finish, in about three hours." It seems as if this would be second nature to someone who is used to working with the complicated cabling and video circuitry like he does.

Don't get the idea Peter brews every time he's home. "I can forget homebrewing during golf season. That's 22 weeks straight road time. But if I've got some time home, and all the housework is done, and I'm caught up on the gold-leaf signs ... it's time to brew!" he says. He also gives credit where it's due: "It would be impossible for me to homebrew without a very understanding wife — thanks, Patty!"

Peter figures he's averaging about 14 five-gallon batches per year. He does some double batches in his four five-gallon carboys, and sometimes uses his two seven-gallon carboys. He's amassing the usual gadgets: a bench capper, a bench corker, a Cajun Cooker and a big 10-gallon stainless-steel kettle. "I also use two hydrometers for each reading and do an average. I don't trust the accuracy completely," Peter says.

Peter not only brews beer but also mead and cider. In fact, he's only been brewing beer since 1994. He was a winemaker and cidermaker for more than 12 years, but never tried beer. "I actually thought brewing was a lot harder than it really is. Then a friend gave me a sample of what was his second batch, and it was excellent. I thought, 'I could do that!' It turned out brewing wasn't so hard after all. I always liked beer better anyway!" Peter laughs.

Peter started out early on good beer. "My dad liked good beer way back before most anyone else did. When I got to be old enough to snitch beers from the fridge, the only thing there was Guinness! It stuck with me: stouts are still my favorite style, along with bitters. I like ales more, but I brew lagers also. I like malty beers, I'm definitely not a hophead," Peter says.

What kind of homebrewer is Peter? "Happy! I'm having a good time. I don't know [whether I'm] advanced or intermediate. I'm meticulous on cleanliness, I think that's the key to a good homebrew. I've done one full-grain batch, but the extract plus specialty grains is making such good beer for me I can't see the time for it [all-grain]. I'm excited by the variety of beer I can brew. It's like a grown man's chemistry set!"

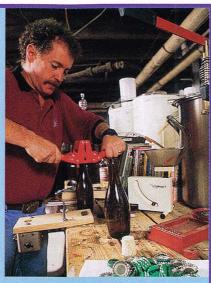
Like most homebrewers, Peter is happy to share his hobby with others. He's hooked his wife's cousin and has made friends with four other homebrewers on NBC's remote crew. "We trade secrets. I've gotten to know them a lot better now that we have that connection," Peter says. Don't expect any homebrew insider stuff on the NBC broadcast staff, though: "We're around them a lot, and are mostly on a first-name basis, but they have greatly different schedules. We don't get together."

Rasputin Imperial Russian Stout

Peter gives this recipe for an imperial stout. It's a good drink: chewy, roasty and bitter.

Ingredients for 6 1/2 gal (24.6 L)

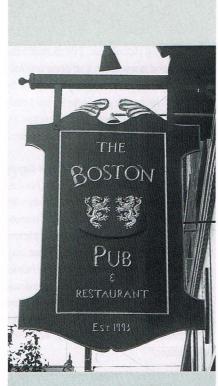
- 6 2/3 lb Northwestern pale malt extract (3 kg)
- 6 2/3 lb Northwestern amber malt extract (3 kg)
 - 1 lb black patent malt (0.45 kg)
 - 3/4 lb roasted barley (340 g)
 - 3/4 lb chocolate malt (340 g)
 - 2 oz Galena hops, 24 HBUs (57 g) (bittering)
 - oz Fuggles or East Kent Goldings hops, 4.5 HBUs (28 g) (bitter)
 - oz Cascade hops (28 g) (finish)
 - oz Hallertauer or Mt. Hood hops (28 g) (finish)
 - 2 packs Edme ale yeast
 - Original specific gravity: 1.075
 - Final specific gravity: 1.018



Add crushed grains to two gallons (7.6 L) of water at 150 degrees F (66 degrees C) and hold for 45 minutes. Bring to boil and remove grains. Add the extract and bittering hops. Boil 60 minutes. Add finishing hops and boil 15 minutes more. At same time, hydrate yeast with one cup of warm water.

Remove wort from heat, strain into three gallons (11.36 L) of cold water and rinse hops with 170-degree F (77-degree-C) water. Use enough water to bring total volume to 6 1/2 gallons (2.6 L).

Cool to 70 degrees F (21 degrees C). Take a hydrometer reading. Add hydrated yeast. Primary ferment for two weeks then bottle with one cup of corn sugar. Age for at least six weeks.





Peter finds his hobbies therapeutic. In addition to homebrewing Peter makes gold-leaf signs like the one for The Boston Pub in Hazleton, Pa., and is an avid birdwatcher. This snowy egret is one from his 2,000-bird life list.

Why does he continue to brew with all the other demands on his time? Like many gardeners, Peter finds the work of homebrewing "almost therapeutic. I enjoy the process. The woodcarving is the same thing. Of course, I also get paid for that!" There also is a more practical reason: "Homebrewing gives me access to some types of beer that aren't easily found in northeast Pennsylvania."

Then there's the stuff Peter describes as mystical. "You know, the real legends about Merlin describe his magic as a mystery to

Merlin himself. It would just happen, and he'd be left unsure of how it happened. That's how I feel about homebrewing: I know what goes in, and how it's all supposed to work, but what comes out is always to some degree a surprise. That's very satisfactory.

"Homebrewing fits into current trends of diversity and an interest in local differences," Peter muses. "It brings you closer to your home, to yourself and sometimes to your ethnic roots. I consider myself a craft brewer, and I think the popularity of home-

brewing reflects the interest in craft-brewed beer. A homebrewer is a craft brewer: he or she just doesn't have a license to sell [beer]."

Peter was off to his next project. In a sprint for homebrewing gold, he figured he'll be able to get in an on-site brew at the Olympics in Atlanta. "I'll buy a carboy and minimal supplies in Atlanta, brew, ferment and bottle. It should be ready just about in time for the tear-down!" Remote site homebrewing, brought to you *live* by NBC Sports! ©1996 Lew Bryson





Too bad your beer sometimes doesn't look as good as it tastes. Or maybe, even worse, it ends up tasting just the way it **does** look.

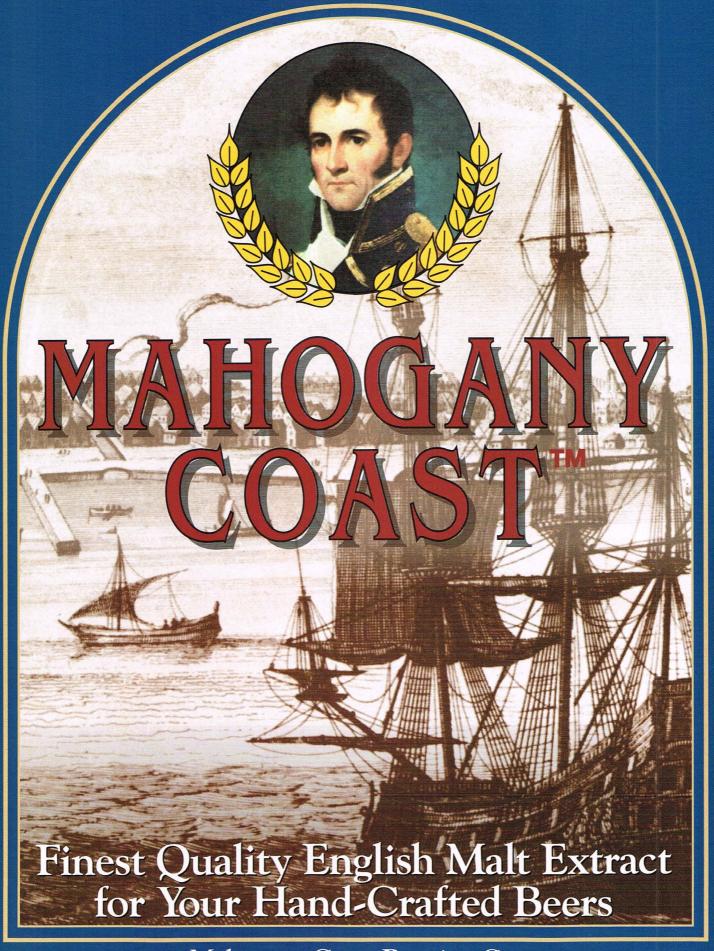
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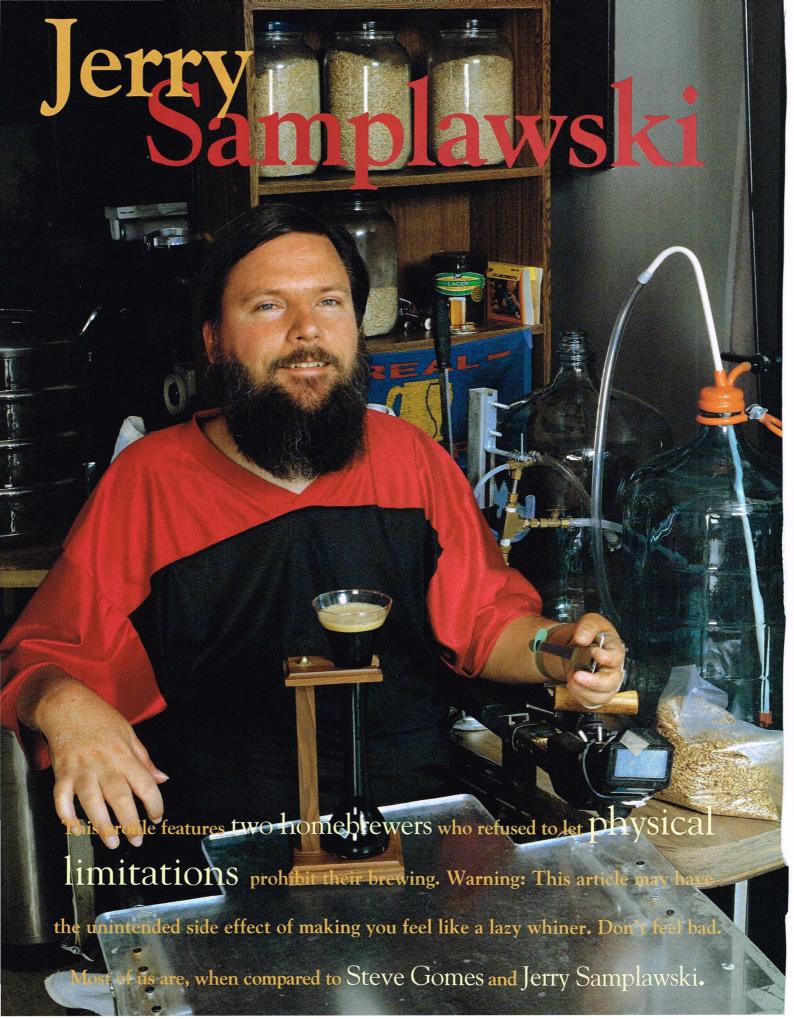
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Wrong. These two men have worked through their physical limitations with ingenuity, determination and patience. For them, one blind and the other in a wheelchair, just getting to the store can be a challenge, yet they make the extra effort to brew their own beer.

The Magic Touch

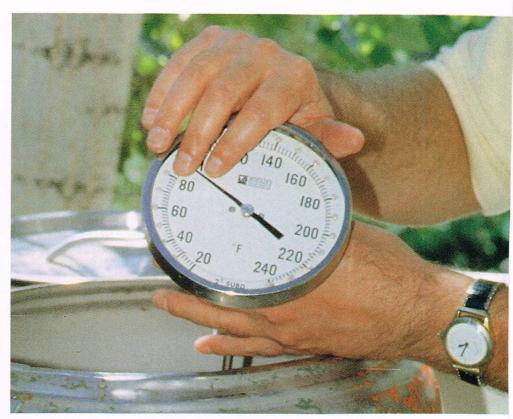


Steve's half-barrel brew kettle has been fitted with a ball valve to simplify the transfer of wort.

Steve Gomes is a straightforward hobby brewer. He doesn't compete and he tends to follow recipes pretty exactly. He's your average homebrewer in every respect except he has been blind since birth and has only a portion of his hearing, even with cochlear implants (sophisticated hearing aid).

Steve brewed his first batch more than 10 years ago using "a plastic bucket and bag of powder," he recalls. "It was really terrible. I threw it away."

But he didn't give up his desire to brew. About two years ago he was given a carboy and some other equipment and got started once again. Unable to find recipes or brewing literature in Braille he turned for



A modified stainless-steel thermometer enables Steve to monitor mash temperatures.

assistance to his local homebrew supply store, Denver's Wine and Hop Shop. Friends and employees recorded several recipes and some of Charlie Papazian's *The Complete Joy of Home Brewing* (Avon, 1984) and Steve typed everything on his Braille typewriter.

Steve's Stout

Ingredients for 5 gal (19 L)

- 10 lbs two-row Briess malt (4.5 kg)
- 3/4 lb roasted barley (0.34 kg)
- 1/2 lb chocolate malt (0.23 kg)
- 1/2 lb 60 °L crystal malt (0.23 kg)
- 1/2 10 00 L crystal mait (0.25 kg)
- 1/8 lb black patent malt (57 g)
- 1 1/3 oz Centennial hops (38 g) (60 min.)
 - 2 packets Lallemand Nottingham dry yeast

Mash grains at 155 degrees F (68 degrees C) for two hours. (The long mash circumvents the need to check for conversion.) Sparge with 6 gallons (22.7 L) 170-degree-F (77-degree-C) water. Boil for 60 minutes. Chill and pitch yeast. Ferment for 14 days then keg.

A volunteer from the Unfermentables, a local homebrew club, guided Steve through the first batch of his revived brewing endeavor, and he hasn't turned back since. He's now an all-grain brewer with kegs chilling in the refrigerator and a growing collection of 20 Braille beer recipes tucked neatly into a three-ring binder along with recipes for Chinese food, cakes, cookies, breads and other

delicacies he loves to whip up. These days he almost always brews by himself, with his seeing-eye dog, George, keeping a vigilant watch. When he brews with others it's for their company, not their help.

In his drive to become more and more self-sufficient, Steve relies on a close network of friends and brewers who are eager to help him overcome whatever hurdle is temporarily blocking his path. To get to the supply store, Steve and George walk to a nearby intersection where Steve holds up a sign that reads simply, "BLIND, NEED RIDE." He usually has a ride within 10 minutes.

"When a challenge gets me, I go crazy," he says. Frustration has led to innovation. His friend Bobby Jones helped design much of his equipment, including a wort chiller, a modified wrench to help Steve dismantle and maintain his Cornelius kegs and a brew kettle made from an old one-half-barrel keg complete with ball valve so he doesn't have to siphon hot wort.

Taking temperatures was a problem Steve remedied with the same solution his mother used to teach him how to tell time. He didn't have a Braille watch as a child, so his mother took the cover off the face of a watch and glued on beads to mark the numbers. Today, Steve has a Braille watch, but he uses beads to mark 10-degree increments on the face of his large stainless-steel thermometer. He feels

where the needle is and counts off the beads to check the temperature of his mash or wort.

Overcoming the obvious problems like reading recipes, using equipment and judging the level of liquid in a boiling pot or narrow-necked carboy doesn't address the natural urge people have to see what they have created. That urge is even more tempting for Steve who, in his personal life and in his professional life as a certified massage therapist, has learned to see with his hands.

"It's kinda hard to tell someone 'Don't look at your beer,'" says Jason Dawdy, head brewer at Denver's Champion Brewery and Steve's friend. "He has a great mechanical aptitude," says Jason, who has taken him on tours of the brewery and "shown" him every valve and fitting.

Steve likes to touch the cooled wort and uses his sense of touch to work through every step of brewing, but this endangers both him and his beer. Steve protects himself against burns and accidents by "thinking carefully and respecting the power of things" like boiling wort and propane flames.

Not touching his beer may protect it from possible contamination, but it also robs Steve of his only chance to "see" his beer. It's just another sacrifice and exercise in patience he is willing to endure to achieve his goal of creating great homebrew.

Las Vegas' Godfather of Beer

In a town that can trace its roots to "the family," Jerry Samplawski has become somewhat of a beer godfather. In Las Vegas, "Anyone who knows beer, knows what's really going on, knows Jerry," says Steve MacMillan, president of the Southern Nevada Ale Fermenters Union (SNAFU) homebrew club. "He is the man."

Jerry deflects such praise. He simply sees himself as a homebrewer and beer judge with a great love of beer and brewing. But on a tour of glitter city's beer hot spots, it's evident that Jerry is recognized not because of his handicap but because of the breadth of beer knowledge he possesses. "When the talk turns to beer, people don't see the wheelchair," Jerry says.

In the stainless-steel brewhouse of Barley's Casino and Brewing Co., head brewer Michael Fergusson asks Jerry to evaluate a not yet publicly available wheat beer and compare it to similar products available at Vegas' two other breweries. Later that night, at the Monte Carlo Brewpub, a man in an impeccable suit approaches Jerry asking for an evaluation of the beers. The man was Tom Almquist, general manager of the Holy Cow! Casino, Cafe and Brewery.

If it weren't for the fact that Jerry is paralyzed below the shoulders and has the use of his arms but not his hands, he could probably have a job as a professional brewer in this town — a position he figures he could handle despite his disabilities with the help of an automated system. For now, he's content to brew his own.



Some of the tools in Jerry's homebrewery include a mounted all-in-one counterpressure bottle filler and capper, and the lap-top computer he uses to log all his recipes.

At any given time, Jerry has up to five beers kegged and chilled in a designated beer fridge with taps sprouting from a hole in the door for easy service. He brews with the assistance of a nurses aide, one of whom is with him 24 hours a day. To say they help him may sound generous; Jerry's brewing assistants handle all the physical duties brewing entails.

But Jerry directs the process with the precision and care of a symphony conductor, carefully tracking time and checking

the precision of measurements. He can spot if something is out of line or not attached properly from across the room, and provides instruction with a patience learned from living in a wheelchair for the past 10 years.

Jerry began homebrewing in 1976 after attending a minitasting and trying his first trappist ale. It was a deliverance from the massproduced beer he had been drinking. During the next 10 years, he only brewed about five batches. "Then I was strictly fooling around with it, brewing off the side of the can,"

he recalls. "That was not real good beer." He was about to start brewing more seriously, but his life was permanently changed on May 28, 1986. The car Jerry was riding in sped off the highway and rolled three times before coming to a stop in the desert near the California-Nevada border.

One passenger was thrown 150 feet from the accident and sustained only temporary memory loss. Jerry, who had been sleeping in the back, was slammed against the roof of the car, bruising his spinal cord between the third and fourth vertebrae at the top of the shoulders. If help had reached him sooner, the damage might have been controlled. Instead, it was four hours before he reached a hospital.

After the accident it took six weeks to be able to raise his left arm to eat. Today he brews his own beer, is a BJCP Certified judge, past president of SNAFU and a member of

the Nevada Chili Boosters, flies solo in a hot air balloon, scuba dives and plans to relearn how to fly his ultralight aircraft.

To facilitate his brewing interests (which he admits now exceed hobby levels) Jerry has designed a system that incorporates speed and simplicity to overcome not only his limitations, but also those of his helpers. A collar fashioned out of sheet metal speeds the boiling process by trapping the heat from two burners. To speed wort chilling Jerry fashioned an over-

sized immersion wort chiller, 75 feet of copper coil, that cools wort from

> boiling to 80 degrees F (27 degrees C) in 10 minutes.

A water fountain attached to the sink makes siphoning a snap. The plastic tube attached to Jerry's racking cane fits snugly over the water fountain spout. After filling the racking cane with water, the end is removed from the spout, clamped shut and put over the carboy or keg. When the clamp is released the wort or beer flows. Kegging beer removes the time-consuming bottling process that would probably drive the aides crazy. For competitions

and club meetings, when bottling is re-



Jerry's designated beer refrigerator holds five kegs and is fitted with homebrew tap handles.

quired, Jerry designed a bottle washer attachment for this dishwasher and an all-in-one counterpressure bottle filler and capper device that is bolted to a kitchen table, which doubles as a brewing workshop.

Jerry, a computer consultant for Rocky Mountain Rehab Engineering, applies his computer skills to homebrewing as well. He uses his PC programmed with all the neces-

> sary brewing calculations, to convert, evaluate, fine-tune and store recipes. From his collection Jerry has chosen to share his version of an Anchor Liberty Ale. Jerry's recipe is a hybrid of four award-winning recipes from Zymurgy converted to extract and adjusted for the hops Jerry had at home.

> Even with every step of the brewing process planned and simplified, nothing is easy. He can't see into the brew kettle and he can't lend a hand if something goes wrong. Even a trip to the supply store isn't simple when it takes 20 minutes to prepare, maneuver and secure his 200pound motorized wheelchair in the back of his modified van.

But that is the least of the problems Jerry faces every time he wants to brew. And every time, he says it's worth the effort.

©1996 Bill Simpson



Ingredients for 5 gal (19 L)

6 3/5 lb Northwestern light malt extract syrup (3 kg)

1/2 lb Laaglander light DME (0.23 kg)

lb 10 °L crystal malt (0.45 kg)

oz Northern Brewer hops, 7% alpha acid (14 g)

1 1/2 oz Cascade hops, 5% alpha acid (43 g) (60 min.)

oz Cascade hops, 5% alpha acid (28 g) (30 min.)

oz Fuggles hops, 3.5% alpha acid (14 g) (five min.)

oz Cascade hops, 5% alpha acid (28 g) (five min.)

oz Saaz hops, 5% alpha acid (28 g) (five min.)

Wyeast No. 2112 California lager liquid yeast culture

cup corn sugar (177 mL) (to prime)

Original specific gravity: 1.056

Final specific gravity: 1.018

Steep crystal malt as water comes to boiling. Remove grain and add malt extract. Boil 60 minutes, chill and pitch yeast. Ferment at 60 degrees F (16 degrees C) for seven days. Transfer to secondary and ferment at 60 degrees F (16 degrees C) for seven days. BACKGROUND BALLOON PHOTO BY STEPHANIE JOHNSON

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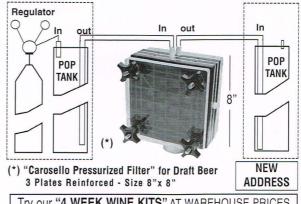
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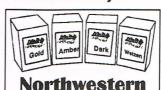


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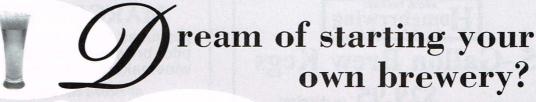


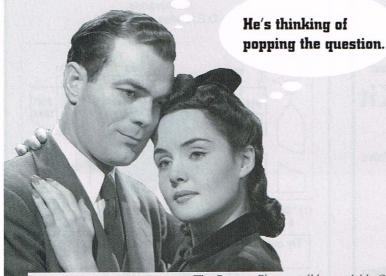
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What was your first brewing experience?

My first brewing experience was in September of 1969. I'd been around my father's efforts, but never had the idea to do it myself, since I was not impressed with homebrews I had tasted. I had been making wine, which was good, and I wondered if it was possible to make good beer at home. Ann McCallum and her husband, Jack, ran a small Wine-Art shop in Portland, Ore., and she explained the reason homebrew was so bad was because homebrewers did not secondary ferment, which she assured me was the problem. She explained about oxygen's ability to damage beer and wine. I tried what she had suggested, and the recipe she furnished me gave good results, better than those of my father, but still not quite what I was hoping for. I tried the second recipe, which used two cans of malt extract (instead of one and corn sugar) and hop flowers, and that beer was good. I was hooked, but the recipe was nearly impossible to follow, so I rewrote it and offered it to Jack McCallum, who immediately suggested I write a book! That book, A Treatise on Lager Beer (out of print), was quite successful, and got me started writing about beer.

Do you still homebrew today? Or, when was the last time you brewed on a homebrew scale?

I no longer brew beer, but I do brew saké about once or twice a year, to keep my hand in the fermentation area. I can always get good homebrew, and good beer, so I no longer have to brew beer for that reason. When I get enough people homebrewing saké, I'll be able to quit that, too.

What other hobbies do you have?

I swim and compete in Masters competition, and teach swimming as a hobby.

What is your greatest beer-tasting recollection?

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What is the weirdest question you've ever been asked about beer?

It was at the Dixie Cup in Houston, Texas, a few years back. We were in the parking lot setting up for judging when a young fellow stopped by to admire our efforts. Out of the clear blue he inquired (in a deep Texas accent) as to whether we knew why New Zealand beer was in green bottles. I had to hear the answer to that one, so I asked why, indeed? He explained the green-bottled beer was left in the sun to ripen the hops, while the other poor folks were left with their beer in brown bottles, with unripe hops. I was stunned, I'd never heard that one before!

What role, if any, did homebrewing play in the development of the craft-beer industry?

Homebrewing has had a major role in the development of the craft-brewing industry. Many of the most successful new brewers are former homebrewers.

What do you perceive to be the greatest threat to the craft-brewing industry?

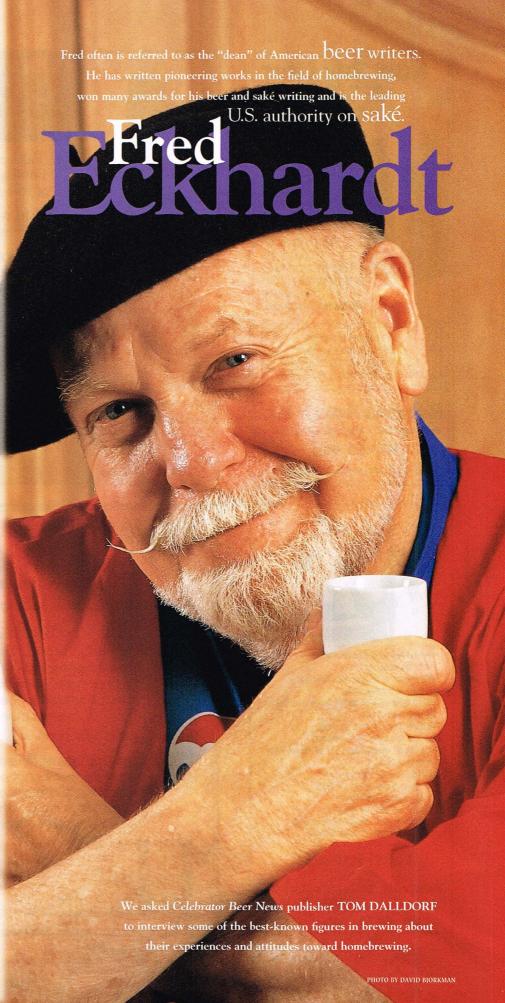
The increasing mongrelization of their beers to please an ever greater segment of the beer-drinking population at large. No one can please everyone.

What sort of beers are in your refrigerator right now?

I have BridgePort, Deschutes, Widmer, Bell Expedition Stout; a Belgian gentleman: Cuvée René, a British noble: a six-year old George Gale Prize Old Ale; a bottle of really fine Dai Ginjo Saké from the Tokyo Ginjo Festival in April, and some of my own saké waiting for me to bottle. But wait, there's more: In my cellar, along with several fine wines, there's a bottle of 1976 Anchor Old Foghom — waiting patiently to tell me whether it can survive 20 years!

Any suggestion or tips for the homebrewer?

Brew the beer you like — and be grateful for it. ©1996 Tom Dalldorf



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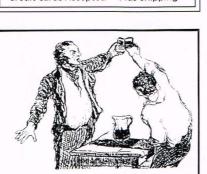
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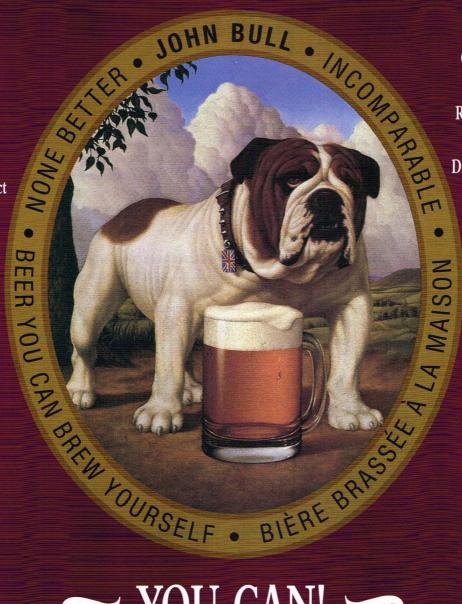
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Mention the name Dave Miller and words like Mentor, inspiration and supporter come to mind. He is a homebrewer who was influential in the development of the hobby and who has taken his love for beer to the professional level without forgetting his homebrew roots.

DAVE MILLER'S
HOMEBREWING
GUIDE
Frontiling you need to have
to make great starting ber

fter that first successful, or maybe not so successful, homebrew many brewers look for information on ways to improve the next batch. Like many other brewers, I turned for advice to Dave Miller's *The Complete Handbook of Home Brewing* (Storey Publishing, 1988). I have quite a few books in my library now, but I still find myself turning to *The Complete*

Handbook when I start a batch. Dave's book in the Classic Beer Style Series, Continental Pilsener (Brewers Publications, 1990), is almost the last word on the style. I've seen many people on the Internet recommend his 1992 book, Brewing the World's Great Beers, as the best book for a beginning homebrewer. And most recently, Dave published the Homebrewing Guide (Storey Pub-

lishing, 1995), meant to be a successor of *The Complete Handbook*. Also on his list of accomplishments is the 1981

AHA Homebrewer of the Year title. This year Dave earned the AHA Recognition Award honoring all he's done for the hobby.

Dave spent most of his life in St. Louis, Mo. He is a charter member of the St. Louis Brews homebrewing club and worked three years as brewer at the St. Louis Brewery. For the last two years he has been brewmaster at Blackstone Restaurant and Brewery in

Nashville, Tenn.

When did you start homebrewing?

I started in 1975. I got a homebrew kit for Christmas.

I guess that's how a lot of people started. Why did you continue?

That's interesting. It's not obvious. It wasn't like the first batch was a wonderful success. It didn't come out at all the way I expected. It was thin and cidery and

way, way too bitter. I took it to a homebrew store and the owner

sampled the beer, grinned at me and said, "That's good beer!" I realized right away there was a problem, but somehow I didn't want to give up. I knew it was possible to make better beer because the breweries do it. I thought there must be some kind of information gap, and that's what led me to grain brewing and also to writing the books.

You weren't happy with your first beer. What kinds of beer were you drinking then, and what were your ideas about good beer?

Schlitz. Miller. It was different in those days. I think today most people get into homebrewing because they've tried microbrewed or imported beers, and they want to make something like that. First they become beer lovers and then they get into brewing. For me it was the other way around. After I started brewing, I started reading Fred Eckhardt's and Michael Jackson's books and became a beer enthusiast.

What sort of books or sources on brewing did you have then?

There wasn't a whole lot out there: a couple of little pamphlet-sized books, one by Eckhardt and one by Byron Burch. The one that really turned me on to grain brewing was Dave Line's *Big Book of Brewing*, which was one of a couple of English books I was aware of. Dave's book really confirmed for me that yes, homebrewers can

make beer from grain, and it is a lot better. Or it can be. That's what Line was claiming, and when I tried it, he was right.

So you did have a reasonable selection of supplies available?

Not exactly. I first started grain brewing in 1978 and the homebrew supply store in St. Louis was not very well stocked, but there were a few bags, about four one-pound bags of pale malt. I knew four pounds wasn't enough to make a full batch, so my first allgrain brew was actually a 2 1/2 gallon batch. And that one came out by far the best-tasting beer I had ever brewed. That's when the light went on. From that point, I was special ordering bags of pale malt.

Do you think that was because the quality of the extract was not very good?

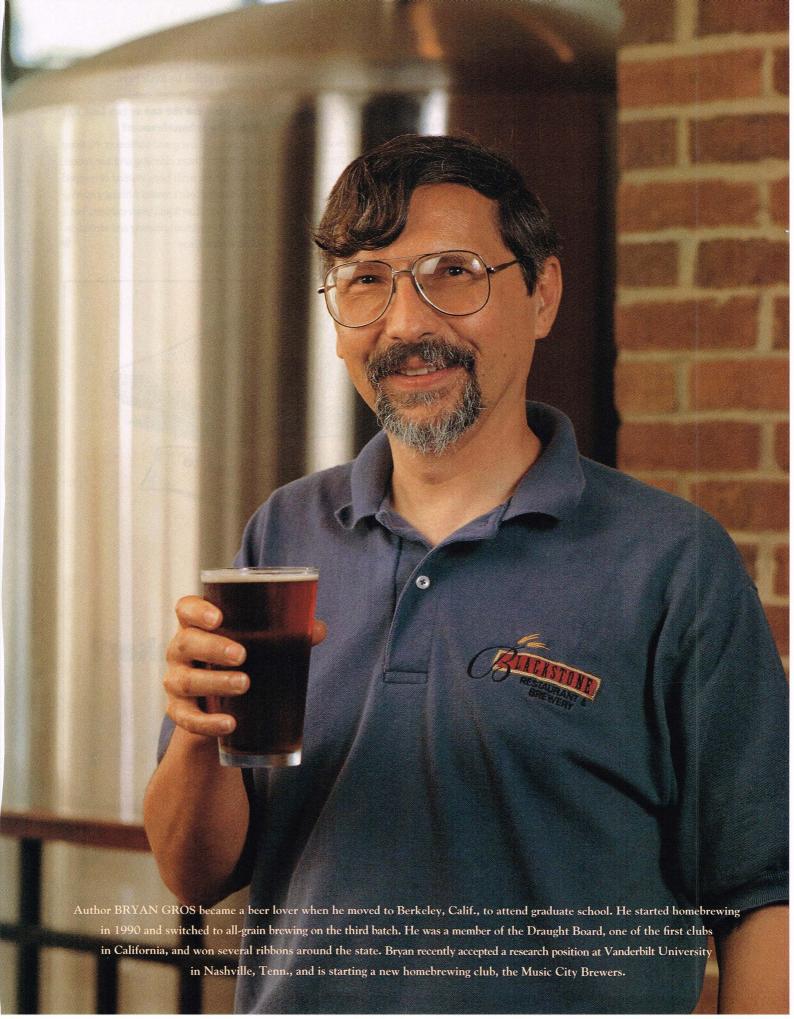
Well, that was part of it. A lot of things are better now, including malt extract. A lot of the extract we were getting then, because

there was not a lot being sold, especially in the Midwest, was bad, old extract. No telling how long it had been sitting on the shelf. But there is another factor. When you're talking about the kinds of beer I was trying to make, which in the beginning were always the lighter beer styles — the Pilseners, the helles — (I got turned on to German beer), there's no question that you can get a fuller body and a smoother palate by using all grain. There was a tartness, a tang I always seemed to get



Dave and his wife Diana celebrate his receipt of the 1996 AHA Recognition Award at Home-Brew Bayou in New Orleans, La.





Dave's Dry Irish Stout

Dave brewed a 15-barrel batch of this stout at Blackstone for St. Patrick's Day this year. Here is a scaled-down version.

Ingredients for 5 gal (19 L)

- 7 1/2 lb pale two-row malt (3.4 kg)
 - 1 lb flaked barley (454 g)
- 3/4 lb roasted barley (340 g)
- 2 1/2 oz Willamette hop pellets, 4% alpha acid (71 g) (30 min.) Wyeast No. 1056 American ale liquid yeast culture
 - Original specific gravity: 1.052
 - Final specific gravity: 1.014

Use a single infusion mash at 150 degrees F (66 degrees C) for one hour. Cool and ferment around 70 degrees F (21 degrees C) with Wyeast No. 1056 American ale liquid yeast culture.

with malt extract. It was very difficult to avoid those flavors when you're making those kinds of beers from malt extract.

And the color?

Oh, the color was a revelation. I had never made a beer before that looked like what I thought a Pilsener should look like.

When you were still brewing at home, what kind of setup or equipment did you use?

For an all-grain brewery it was about as basic as you can get. My mash tun was a five-gallon enamelware pot, and my kettle was an eight-gallon enamelware pot. I made a couple of different lauter tuns at different times, but the one I ended up using most of the time was a six-gallon plastic trash can with a grain bag. I copied the plans in Dave Line's book and made mine with a mesh bottom and canvas sides. Those were the basic pieces of equipment. Later I built a box lined with insulation on all sides to avoid having to keep heating the mash.

That's pretty much what's in *The Complete* Handbook of Home Brewing.

Right, that's the way it is described in *The Complete Handbook*. Nothing fancy. The last couple of years I was homebrewing, I finally got a couple of soda kegs and a gas cylinder so I was able to start doing some draft beer. If I have one regret about my homebrewery, it is not the lack of stainless steel or any of that stuff. I used a copper coiled immersion wort chiller for years and years. I never felt

hamstrung by any of that. The one thing I wish I'd done was to get those draft kegs a lot earlier and gotten out of that bottling game.

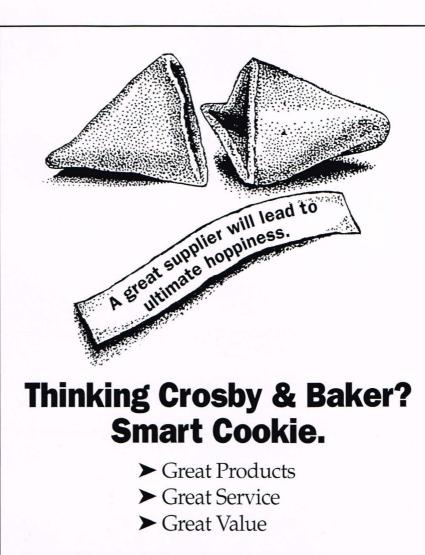
What's your favorite beer style?

I'm not going to cop out like everybody does and say "the one in my hand." Assuming you're talking about good beers in good condition, it is really hard for me to turn down an Oktoberfest. However, I would also like to go on record as saying that I'd rather drink a fresh Budweiser than a stale oatmeal stout.

When you work in a brewpub, you become extremely spoiled by fresh beer.

Finally, what are the one or two best tips you can give to homebrewers?

That's easy. Cleaning and sanitation. Nothing else matters without cleaning and sanitation. I'd also say use fresh hops instead of hopped extract, but it doesn't matter without cleaning and sanitation. Use liquid yeast cultures, but it doesn't matter without cleaning and sanitation. ©1996 Bryan Gros



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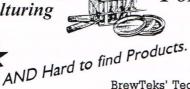
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aced with legal restrictions, cramped housing and a relative lack of access to practical advice, Japanese homebrewers like Junko Saito encounter enough hurdles as it is. Earthquakes don't make things any easier.

When the Great Hanshin earthquake struck the Kobe area of Japan early on the morning of Jan. 17, 1995, it did more than disrupt Junko's brewing schedule. It took the life of her father, Yoshiyuki Kita, flattened her home and left the family electronics business in disarray.

The quake also dealt a blow to the high hopes that Junko and her husband Hiroshi had for The Cellar Japan, their new retail and mail-order homebrew supply shop that had been profiled in the local media only a week earlier.

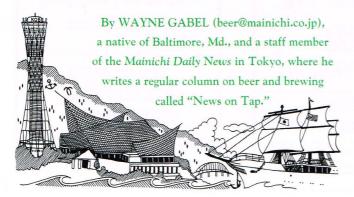
"After the earthquake, I decided to quit brewing and give up the business because I was really too busy with my house and my family," Junko says.

Eventually she changed her mind when the time came to raze her parents' quake-damaged home. The experience brought back memories of her late father and encouraged her to get on with her life.

"My father was the first customer of our shop. When he tried my homebrew, he was really astonished by the taste," she says. "Of course, he was a typical middle-aged Japanese man. He drank lager all his life and he never tasted anything else.

"But then he started brewing his own beer, and when my parents' house was being taken apart they found about 200 bottles of homebrew my father and mother had made," she continues.

"At that point, I felt I could go on brewing because I knew there were many people like my father. They enjoy beer, but they only know one style. There are many others they should taste," she says. "So many people don't realize what's out there in the world. When they try something new, their reactions remind me of what it must have been like when beef and coffee were introduced to Japan."



Although the Saitos were able to relocate their shop to a warehouse that had emerged from the quake relatively unscathed, it was not until their home was completely rebuilt more than a year later that Junko could begin to brew again — which was good news for homebrewing enthusiasts around Japan.

The movement in Japan, which is still in its infancy, needs pioneers like Junko whose energy, leadership and entrepreneurial spirit may one day be instrumental in elevating homebrewing from its current position on the fringes of legality.

Put simply, Japanese law prohibits the homebrewing of beverages with an alcohol content of more than 1 percent by volume. However, the importation and sale of brewing supplies, which are now openly available, is tacitly permitted with the understanding that purchasers will see to it their brews conform to existing regulations.

Junko explains that retailers are required to include warnings explaining the law in their catalogs and instruction manuals. Thus warned, it is up to the customer to obey the law.

Enforcement, however, does not seem to be zealous. According to Junko, that is partly because the authorities concede that "mistakes" will inevitably occur in the home production of beer by amateurs. Thus, they say, it is to be expected that homebrewers will sometimes "accidentally" make beers of greater alcoholic strength.

The laws remain on the books, though, and the possibility of prosecution — however remote — is something homebrewing enthusiasts and retailers must contend with.

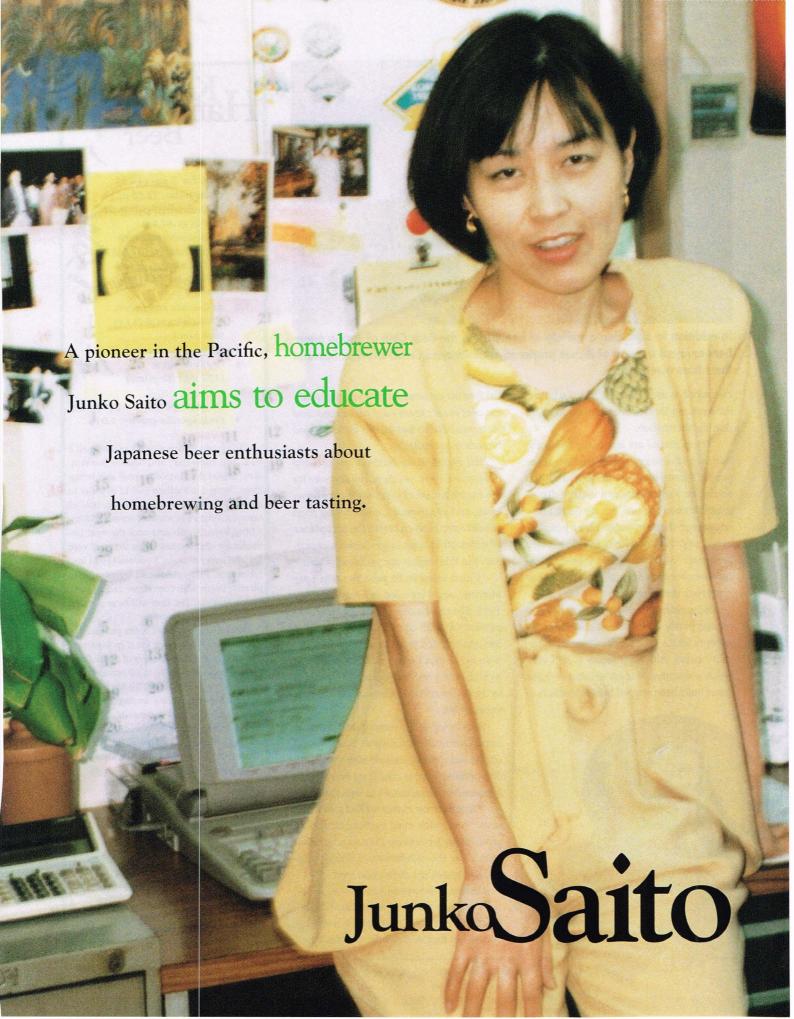
"One of the newspapers wrote about a man from Miyazaki Prefecture who won first prize in a homebrew competition. Soon afterward, he got a warning letter from the tax authorities," she explains.

Although resident foreigners have been actively brewing in relative secrecy for years, homebrewing is only now beginning to win converts among the Japanese population.

Like many Japanese homebrewers, Junko is relatively new to the game. She first became aware of homebrewing in June 1994, after receiving some catalogs from a friend in Seattle. Satisfied with the results of her initial experiments, she decided to open a shop to spread the word to other Japanese.

"None of our customers ever dreamed it would be possible to brew their own beer," she says. "They knew it was possible to brew doburoku (a cloudy, milky-white unfiltered saké), but they couldn't imagine making their own beer."

Awareness of homebrewing is on the rise, but there is still a sense of isolation among Japan's widely scattered homebrewers. To remedy the situation, Junko helped set up the Beer Club of Japan, one of four Japanese clubs registered with the American Homebrewers Association. The club publishes a newsletter and meets irregularly for parties and seminars. The most recent party, held in Kobe in late June, attracted brewers from distant parts of the country. Although





In addition to sampling a variety of homebrew, the Beer Club of Japan members enjoyed a menu of dishes prepared with American craft-brewed beers at their June meeting.

competitions are a possibility in the future, the emphasis for now is on camaraderie and sharing information.

"These parties are one of the few occasions we have to get together to taste other people's homebrew — the good and bad ones. The participants can usually distinguish between the two, but we don't really encourage them to judge other people's beer," says Junko, who is the club's vice president. "At this moment, I want Japanese homebrewers to enjoy brewing and to appreciate the taste."

The growing interest in homebrewing is caused partly by increased consumer familiarity with a wide range of imported specialty beers. Although Japan is still very much a country of lager drinkers whose tastes have been shaped by the products of

the four major domestic brewers, the Japanese beer lover's knowledge of the drink and its myriad styles has grown by leaps and bounds in recent years.

The partial deregulation of the brewing industry in 1994, which paved the way for the establishment of small-scale craft breweries, and experience gained during trips abroad have been crucial to the acceptance of styles other than lager. Junko's experiences in this respect are perhaps typical.

"I tried a few India pale ales when my husband and I traveled to Seattle in May 1995. That was a real shock. I'd never experienced that sort of hoppy taste. I thought it tasted just like some of the Chinese medicines I used to take when I was a child," she says. "But gradually I got used to the tastes and the colors of the different styles of beer."

Back in Japan the sometimes frustrating search for new and different beers — and occasional disappointment with the condition of those samples she does find — only increased her attachment to homebrewing.

"Homebrewing makes me feel great," she says. "It is much more exciting to drink a good-tasting homebrew than a commercial beer. I like the satisfaction of doing it myself and knowing I did a good job."

Mistakes do happen, though.

"I've never really had a bad batch. Sometimes batches don't turn out the way I expected, but they've never disappointed me."

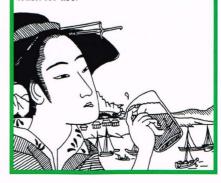


Ingredients for 5 gal (19 L)

- 9 oz Hato-cha* (2.66 mL)
- 4 lb Alexander's pale malt extract (1.81 kg)
- 1 lb Alexander pale malt "kicker" extract (0.6 kg)
- oz Cascade hop pellets, 4.5% alpha acid (28 g) (60 min.)
- 1/2 oz Cascade hop pellets, 4.5% alpha acid (14 g) (five min.)
 - 1 package ale yeast
- 3/4 cup corn sugar (177 mL) (to prime)
 - Original specific gravity: 1.050
 - Final specific gravity: 1.012

Bring one gallon (3.8 L) of water to a boil. Add Hato-cha* and boil for five minutes. Strain the Hato-cha, cool and refrigerate. Bring 1 1/2 gallon (5.7 L) of water to a boil, add malt extracts and hops, boil 60 minutes. When five minutes remain add finishing hops. Strain and cool the wort immediately after the boil. Pour the wort, cold tea and water to make 5 gallons (19 L) into fermenter. Pitch yeast and ferment completely. Bottle with corn sugar and age one to two months. The beer will have a nutty, grainy taste from the tea.

*Hato-cha is a brand of tea produced in Kobe since 1960. Look for it in Japanese markets. It is a combination of malted and roasted pearl barley (50 to 60 percent) and barley (40 to 50 percent). This tea has been popular for generations among the Japanese as a healthy, cool summer drink. To create a homemade version of Hato-cha try malting barley and pearl barley for 24 hours. Roast until the grains are light brown, then crush for use.







Junko's dog Koro looks on as Junko bottles her latest batch.

she says. "They're just like children in that respect. Sometimes they get out of control but, after all, they're only children."

Junko and Hiroshi each brew about once a month, using their own recipes. Porters and stouts are among their favorites, and the results are usually shared with family and friends.

"Every time we brew a batch, we want someone else to try it. I think that is how all homebrewers feel," she says.

Junko says her setup is very basic. She uses plastic fermenters predominantly, but she does have a few carboys. Carboys have only recently become available in Japan and Junko hesitated before deciding to carry them in her shop because she wasn't sure her Japanese customers would accept them. (Foreigners, on the other hand, sometimes go to extremes to find them, Junko says.) She prefers five-liter minikegs for lagering and packaging because they fit more easily into Japanese refrigerators, which tend to be smaller than their American counterparts.

Homebrewing fits neatly with other aspects of Junko's lifestyle. A member of an organic food cooperative, she smokes her

own bacon and ham, and makes homemade *umeboshi*, a traditional variety of very sour salt-pickled plums.

"I'm very concerned about what my family and I eat. The good thing about homebrewing beer is I know what goes into it," she explains. "I don't really trust the claims I hear about 'all-natural ingredients.'"

The ability to exercise greater control over the final product has attracted Japanese of all ages and from all walks of life to do-it-yourself activities like homebrewing. In years gone by, however, there were other motivations.

"My parents used to tell me about homebrewed saké. When you went to the countryside you could still find places where they made their own *miso* (fermented soybean paste) or saké, but they did it because they were in need," she says. "Right now, things are different. People who homebrew do it because they want something better, something they cannot find on the market."

If necessity no longer determines who brews and who doesn't, other aspects of life in modern Japan, with its overcrowded subway trains and tiny apartments, may. Finding space in which to brew, for example, can sometimes be a problem, particularly for the urban dweller, but not an insurmountable one.

"We have a space problem compared to American homebrewers, but we are used to it," she says. "If someone is really interested in homebrewing, they will find space to brew, no matter where they live or how big their home is."

Costs are another factor. As with the cost of so many other things in Japan, a brewer's initial investment is considerably higher than it would be in North America. Whereas a beginner in the United States may expect to spend around \$70 for a basic kit, Junko estimates the average Japanese must reckon with start-up costs in the neighborhood of \$180 or more. The cost of a can of malt extract, she says, may vary from \$10 to \$50. Those prices may seem high, but she says they are not extreme if one wants to enjoy specialty beers in a country where a 12-ounce can of domestic lager can cost as much as \$2.50.

"As a club, we've been experimenting with beers brewed with different kinds of *mugi-cha* (barley tea, often served cold in summer). We've had some unusual beers, too, like *ikasumi* (squid ink) beer," she says with a laugh. "It was awful."

Although Japan's homebrewing culture is still experiencing growing pains, Junko is confident that Japanese homebrewers will soon have ideas and innovations to contribute to their colleagues around the globe. ©1996 Wayne Gabel



Junko opened The Cellar Japan, a homebrew supply shop in Kobe, in 1994 to spread the word about homebrewing and variety in beer styles.

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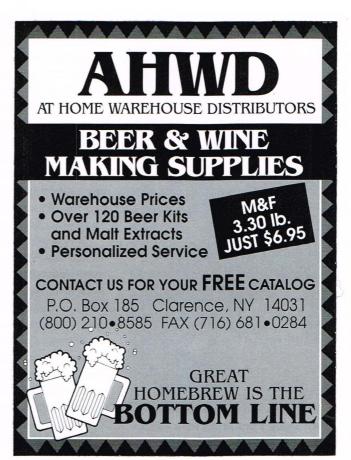
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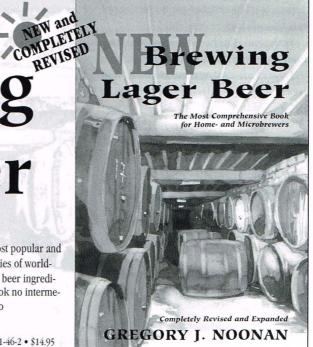
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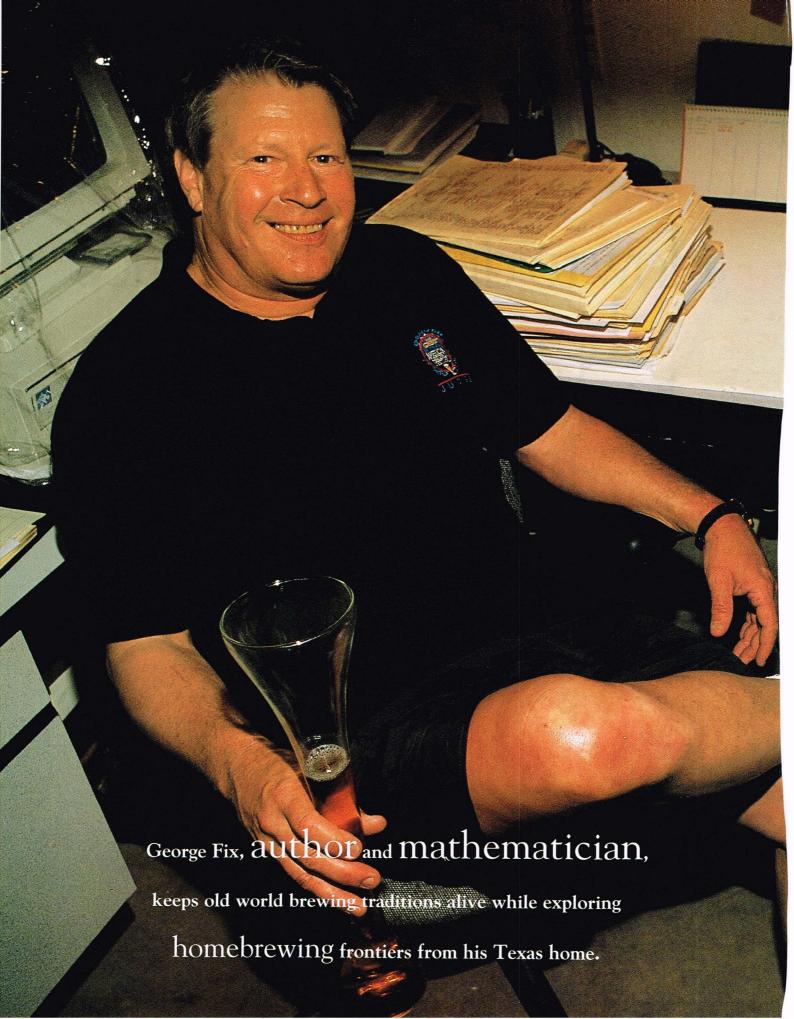
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he phone rings. "Hello, is this the Fix residence?" asks the man on the other end. "I'm with the Texas Department of Public Safety (DPS) and I'll be inspecting your house in two minutes." Laurie Fix hangs up. She is home alone in her ranch-style house at the end of a cul-de-sac in Arlington, Texas, near Dallas. She doesn't know why the DPS, the state analog of the BATF, would be making a surprise visit, so she calls her husband, George.

"Someone from the DPS just called. He's coming here in two minutes," she says.

"Oh my God," says George before hanging up and driving home with several worst-case scenarios playing out in his mind.

Of course, it turns out it was all a mistake. But so was Waco.

Several months later I'm in the three-bedroom brick house where George Fix, award-winning homebrewer and mathematician, and his wife Laurie live with four dogs. A photographer and I have driven, windows and sunroof open in the 97-degree heat, 200 miles from Austin to Arlington to see George brew a batch of beer. The heat is mitigated only slightly by the 30-mph wind blowing steadily from the south.

In the Fixes' neighborhood the trees are large and the lawns fit for putting. A low whirring sound is coming from somewhere, the collective hum of the thousands of air conditioners that have colonized Texas. Looking around, it's hard to believe the DPS would be inspecting anyone here.

"To brew on a day like today in Texas," says George, "we'd have to get up at 3 a.m. I decided to spare you that, so we'll be carbonating and bottling today instead of brewing."

In the garage where he brews his award-winning German lagers and ales are 15 stainless-steel six-gallon (22.7 L) storage tanks, six refrigerators, three 20-gallon (75.7-L) stainless-steel brewpots, one cylindroconical fermenter, one microscope, a 40,000-BTU propane burner, miscellaneous microbiological reagents and no car. The Fixes' cars, an Oldsmobile and a Silhouette, sit in the driveway in the sun. This garage probably has never held a car since the Fixes moved in 10 years ago.

"When Brewing Is Outlawed, Only Outlaws Will Brew," says a bumper sticker on a refrigerator. About 60 ribbons of various sizes and colors and 20 framed certificates and plaques surround us, all from regional and national homebrew competitions that George has entered in the last 15 years.

"This was the first prize I ever won," he says, holding an engraved pewter mug with a glass bottom. The Dave Line Trophy is the top award of the International Homebrew Competition in Phoenix, Ariz., and Fix won it in 1981. "The only Belgian beer I ever brewed won best of show. Back then no one knew about Belgian beer. They probably had no idea what the hell it was!"

There were even more ribbons and certificates, but last year a fire in the brewery started by lightning destroyed many of them. Fortunately, the fire did not harm the small library of yeast slants he keeps in the refrigerator.

Connections

"I grew up with a beer family. Beer is something we've always had. At one point I tried making wine, but I got bored with it," says George. "This year I have learned more than any other year since I've been brewing. There's no way to master something as complex as brewing and that's what makes it exciting."

He finds brewing very relaxing. The hours spent lifting and cleaning fermenters are therapeutic antidotes to the more cerebral activities associated with his work as professor of mathematics at the University of Texas at Arlington.

"Alnwick is my favorite brewery," says George, pointing to a picture of a small brewery near Cambridge, England. "I just fell in love with their pale ale. That is the best pale ale I've ever had in my life."

On the next refrigerator is a photo of a young man wearing a dark suit and a skinny black tie. His hair is cut short like the Beaver's on "Leave It to Beaver." The photo is from George's 1957 high school yearbook.

Author STEFAN SMAGULA (smag@mail.utexas.edu) is a freelance writer, homebrewer and graduate student in Austin, Texas.



George's homebrewery is more laboratory than kitchen. There is a one-half-barrel Unitank cylindroconical fermenter, counterpressure bottle-filling equipment in the foreground and wild yeast and bacterial detection media, microscopes and a hemocytometer on the counter.

He was still in high school when his grandfather introduced him to beermaking. "Here, take a look at this," he says, taking a black notebook from a shelf. He opens the cover and points to the words "Brauereibetriebslehre, Adolph Zimmerman, Buffalo, New York." The yellowed paper, cracked binding and sepia ink betray the notebook's age. The looping, meticulously formal script hints at the writer's European education. George's grandfather had taken these notes from a brewing apprenticeship taught by Zimmerman in 1905. George opens a page at random and reads: "'Faro, lambic ... ' You see? Their techniques might have been a little primitive, but they were quite skilled back then." He is referring to the difficulty of making Belgian faro, a blend of spontaneously fermented low- and high-alcohol beers.

George's grandfather went to Buffalo after emigrating from Cheminez, Germany (formerly Karl Marx Stadt before reunification), the ancestral home of the Fix family. Sometime before Prohibition, George's grandfather moved from Buffalo to Dallas to work at a brewery there, and the Fixes

have been in the Dallas area ever since. "After Prohibition, he never went back to brewing for other people. He started his own company," says George.

"I was my grandfather's bottle washer. He had a system like this in his garage," George motions to the pots and burners that surround us. "When I first started, I wanted to copy my grandfather's beers, so I used his brewing log. His lagers were always all malt, but his ales were more adventuresome. He used juniper berries in some, and I use juniper once in a while. But I didn't copy the mashing schedules, they have changed dramatically. From the start I used my own yeast — I learned that from my grandfather. He kept his own yeast going for 40 years. These techniques all go back to the last century. It's hardly new tech."

It's easy to understand why George takes so much pleasure and meaning from brewing. Through grains, water and yeast he has managed to link Old World to New, and grandfather to grandson.

But a sense of connection and tradition is not all George has gained from homebrewing. He also has gained insights into



With a wall of brewing accolades behind them, George and Laurie Fix toast the history and future of beer.

the applicability of certain mathematical models he studies that predict the behavior of enzymes such as alpha and beta amylase.

"I've been able to test different models through brewing. We have nonlinear differential equations that describe the time-rate of change of things in terms of other quantities, such as sugar and protein. You can actually solve these equations and predict in advance how a mash will come out," George says. "Everything I know about mashing has come through those mathematical models."

One result of George's overlapping interests is the "40-60-70" Celsius mash schedule, which George describes in his book, An Analysis of Brewing Techniques (Brewers Publications, upcoming), a follow up to his Principles of Brewing Science (Brewers Publications, 1989). "The 40-60-70 method came straight out of mathematical models," says George. "In the model you can see what you are really doing with a low-temperature regime."

"The lower temperature mash does two things," George says, "it breaks down gums like betaglucans and dissolves grain carbohydrates therefore increasing the specific gravity but not necessarily converting the carbohydrates."

Not Just A Hobby

"I guess you wouldn't call it a hobby," says Laurie Fix.

"What would you call it then?" I ask.

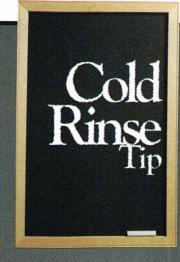
"I don't know, " says Laurie.

"A lot of fun," interjects George with a laugh. But as is true with any passion, even passions as tangibly rewarding as beermaking, homebrewing is not always fun. One day when George was brewing a batch in the kitchen of his Pittsburgh, Pa., apartment, something went terribly wrong. "It was a disaster with the whole mash all over the kitchen floor." When Laurie came in to see what had happened, she saw George lying on the kitchen floor amid the steaming grains. He was crying. "I cleaned it all up for him. He was just too upset to do anything," says Laurie.

Nor was it fun the day the DPS visited. Several weeks before the surprise visit, George had filled out a form that would allow him to purchase glassware for yeast culturing. "They made me fill out forms to buy some glassware, can you believe it?" he asks shaking his head. One of the questions on the form was "Which of the following chemicals do you plan to use?"



George adjusts the CO₂ on his counterpressure bottling equipment.



"Cold-side rinsing," that's the latest thing, according to George Fix, mathematician and homebrewer. "Rinse all your equipment with cold water, never rinse with hot water. When you rinse with hot water you grind in or bind organic materials to the surface. After rinsing with cold water then you can use hot water with a cleaning agent.

"When you do it this way you can see the results. For example, if I rinse that kettle with hot water it takes me twice as long as if I use cold water."

George learned about cold-side rinsing when he was visiting a large American brewery and saw some workers rinsing a 750-barrel fermenter with cold water. "I think you've got a serious problem here," George said to the brewer. "Those guys are rinsing with cold water!"

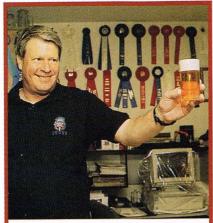
"Sure they are, and it works much better than hot," said the brewer.

He has been rinsing with cold ever since.

"I didn't want to find out later that I couldn't use a certain chemical because I hadn't checked it off, so I checked the whole list." Unfortunately, on this list were the chemicals necessary to synthesize methamphetamines and other illicit substances.

The DPS agent who drove all the way from Austin took one glance at the garage and realized the glassware in question was for culturing *Saccharomyces cerevisiae*, and not for synthesizing "crystal meth," a drug that has become a problem in Texas high schools. The agent's father happened to be a brewer.

"We were lucky we didn't get a bad egg. I gave him a six-pack to take home and he wrote back saying he enjoyed it. Now George proudly displays his license to purchase



Fill 'er Up with

George Fix's first-wort-hopped High Test won first place in the German light lager category at the Denver region's first round of 1996 National Homebrew Competition, a silver medal in the 1995 AHA National Competition and was runner up in the BOS-TRASH 1996 homebrew competition in Pittsburgh, Pa.

Ingredients for 13.5 gal (51 L)

- 20 lb Durst Pilsener malt (9.1 kg)
- 4 lb Durst Vienna malt (1.8 kg)
- 3 oz German Tettnanger hops, 4.5% alpha acid (85 g) (first wort hops)
- 2 oz German Tettnanger hops, 4.5% alpha acid (56.7 g)
- 2 oz German Select hops, 3.75% alpha acid (56.7 g) (finish) Wyeast W34/70
- · Original specific gravity: 1.054 (13.5 °Plato)

Mash at 104, 140, 158 degrees F (40, 60, 70 degrees C). Add first wort hops to kettle as sweet wort is draining in from lauter tun.

Ferment 12 days at 50 degrees F (10 degrees C). Age sev-



glassware: "Pursuant to sections 481.078 and 481.081 of the health and safety code, this permit authorizes the purchase of chemical precursor laboratory apparatus inside or outside the state, subject to any restrictions stated."

Despite the happy ending to this story, George is not happy with the government agencies regulating brewing. "I've come to really distrust all of them, especially the BATF," says George. "In fact, I think I'm slowly turning into an anarchist. I read a libertarian digest on the Internet and I agree with 90 percent of what they say, especially when it comes to brewing.

"Down here the religious right scares the living daylights out of me. I guess my grandfather got shut down because of religious prohibitionists and I see in this group — Pat Robertson, and that group - I see prohibitionists. They would make the government more active in controlling people's lives than the liberals would, to tell the truth. So I certainly fear them greatly. Other than that I am pretty much apolitical."

A Psychological Fix

"When you're brewing, do you ever worry instead of relaxing?" I ask George.

"Yeah. I sure do!" he answers.

As George bottles his Dortmunder-style lager using a counterpressure bottle filler, I ask him to play a little psychoanalytical freeassociation game with me. I give him a phrase and he responds with the first thing that comes into his head.

Stefan: Melanoidins

George: Favorable

Stefan: Hot-side aeration

George: Unfavorable

Stefan: 40-60-70

George: Math

Stefan: Negra Modelo

George: Good - that's one of the last commercial beers we actually drank.

Stefan: Beer's law

George: A law that's confused many.

Stefan: Papazian

George: Groucho Marx

Stefan: DeClerck

George: God

Stefan: Love

George: Laurie

Stefan: Hate

George: Prohibitionists, the religious right

A City Set On A Hill

The photographer and I say our goodbyes and head out the door to the car. After being in the air-conditioned garage for nearly six hours, I've forgotten how hot it is outside. On the highway heading toward Austin I see something I had not noticed before. It is a triangular sign placed high atop a pole on Interstate 35, and spinning quickly in the hot wind. "God — Jesus Christ — Holy Spirit," it says over and over like an advertisement. I am reminded of what George has just said about the religious right.

With his words about the BATF still fresh in my mind, we approach Waco, which lies midway between Arlington and Austin. We decide to pay a visit to nearby Mt. Carmel where the Branch Davidian compound once stood in obscurity, and where it is now conspicuous in its absence. Three years ago, 82 people perished in a fire at Mt. Carmel. It was the deadly end of a 51-day siege led by agents of the BATF.

"I'm looking for the Branch Davidian compound." I say to the man behind the counter at the EZ-Mart.

"That'll be \$100," he jokes. "Take a Uturn and look for the signs that say 'Mt. Carmel." We follow these directions, but see no signs.

We keep driving and eventually recognize the compound by the two burned-out buses that look like the exoskeletons of some huge mechanical beasts. There is a small museum here called the Loud Cry Museum, operated by a woman who was associated with the Branch Davidians. Some Biblical words are painted on the side of the plywood and cinderblock museum: "A city set on a hill cannot be hid." The irony is that there is virtually nothing left of this city save rubble, barbed wire and a bathtub with bullet holes.

Just outside the ruins I chat with a truck driver who is in Waco for a Hank Williams concert. He wears a black T-shirt, mirror sunglasses and has a cigarette pack in his shirt pocket. As we speak about the burned bus nearby, he bends down to pluck two small lilac wildflowers no bigger than his thumb. He smells them and says, "Y'all take care,"

before he returns to the cab of his big rig, flowers in hand.

Moved by this unexpected show of tenderness, I walk around the ruins with renewed esteem for this rich and strange place called Texas. It's a place where neo-Prohibitionism and religious fundamentalism are on the rise, and where some fear the BATF. But it's still a place where a homebrewer like George Fix can cultivate ancestral connections and gain mathematical understanding through the ancient mix of grains, water, hops and yeast. And it's a place where truckers can find solace in the splendor of wildflowers.



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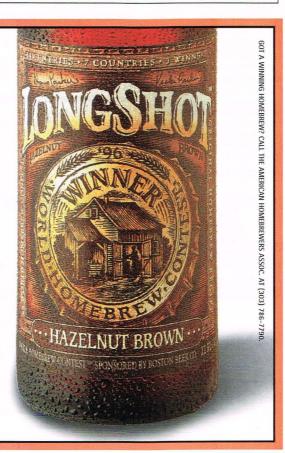
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"We weren't sure if our friends loved it because it was good, or because it was was free."

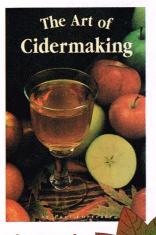
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Oktoberfest, Vienna, Märzen

By George and Laurie Fix

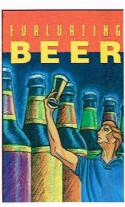
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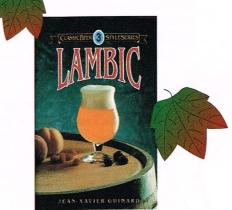


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Nooffan

Greg Noonan is the quintessential

homebrewer turned commercial brewer. He boasts

an impressive résumé — author of the seminal Brewing Lager Beer (Brewers

Publications, 1986) and the updated, revised and republished New Brewing Lager Beer

(Brewers Publications, 1996), renowned authority on Scotch ales, (author of Scotch Ale, published by Brewers Publications in 1993), Proprietor of one of the nation's most celebrated brewpubs, the Vermont Pub and Brewery — yet he's never forgotten his roots. He remains a homebrewer at heart.

love beer. I'm just so enamored of its flavor. I love wine and hard cider, too, but more than anything it's the flavors of beer I love. Consequently, I love to brew and play with the creation of those flavors," he says with unabashed enthusiasm, still not jaded by scores of 80-hour-plus weeks spent working in his two New England brewpubs.

Greg first tasted the joys of homebrewed beer, and homebrewing, as a new college graduate living in southern New Hampshire more than 20 years ago. He fondly recalls an irascible neighbor named Ron ("He was quite a character. He'd bark like a dog as often as he'd speak — really a colorful guy!") who hosted homebrew parties at his rural farmhouse every Friday evening.

The revelers ran out of homebrew one night and Ron offered to venture to the nearest store, about a 45-minute round trip, to restock with commercial beer. As he left, he mentioned a stash of old homebrews in the root cellar under the kitchen floor. No sooner had he departed than his friends moved the kitchen table, lifted the hatch to the root cellar, and unearthed two rotted wooden cases of cork-bottled homebrew, half buried in the earthen floor. It was somewhat of an epiphany for Greg.

"This stuff had been there for so long it was almost hard to imagine," he recalls. "From the look of the bottles and the fact that they were corked, it was a fairly safe bet they'd been there since Prohibition. The stuff was heavily sedimented — it was definitely out of code date! But we popped those corks and sampled the beer anyway. It had gone way beyond the sherrylike character you often find in well-aged beer to the point where it tasted like prune juice. Yet I still remember

that evening as special. It's when I really connected with homebrew as something unique.

Move the calendar ahead two decades and Greg's enthusiasm for his craft remains unabated. He sees an inextricable link between the growth of homebrewing and the surge in craft brewing in the United States, and he believes that bond will remain vital for many years to come.

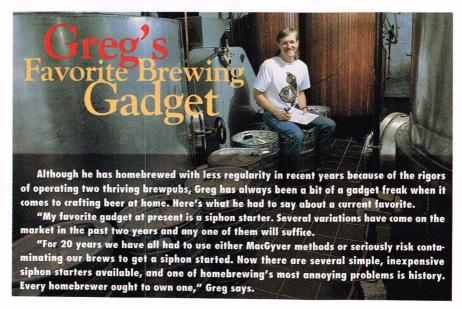
"There's an explosion coming up that will be unprecedented for both [the homebrewing and microbrewing] segments," Greg predicts. "I really believe that 10 to 20 percent of the beer on the market is going to be craft brewed in fairly short order. It's only 2 percent now, but it will take a lot less time to go from 2 to 20 percent than it did from 0 to 2," Greg says.

"You'll see a similar growth in homebrewing, too. What you have is a lot of younger kids who are just turning the legal age to drink and the microbrewers, not Budweiser and the other giants, are winning them over. The message is getting out there that a rich variety of superb beers can be crafted in small batches close to home — even at home, if you want."

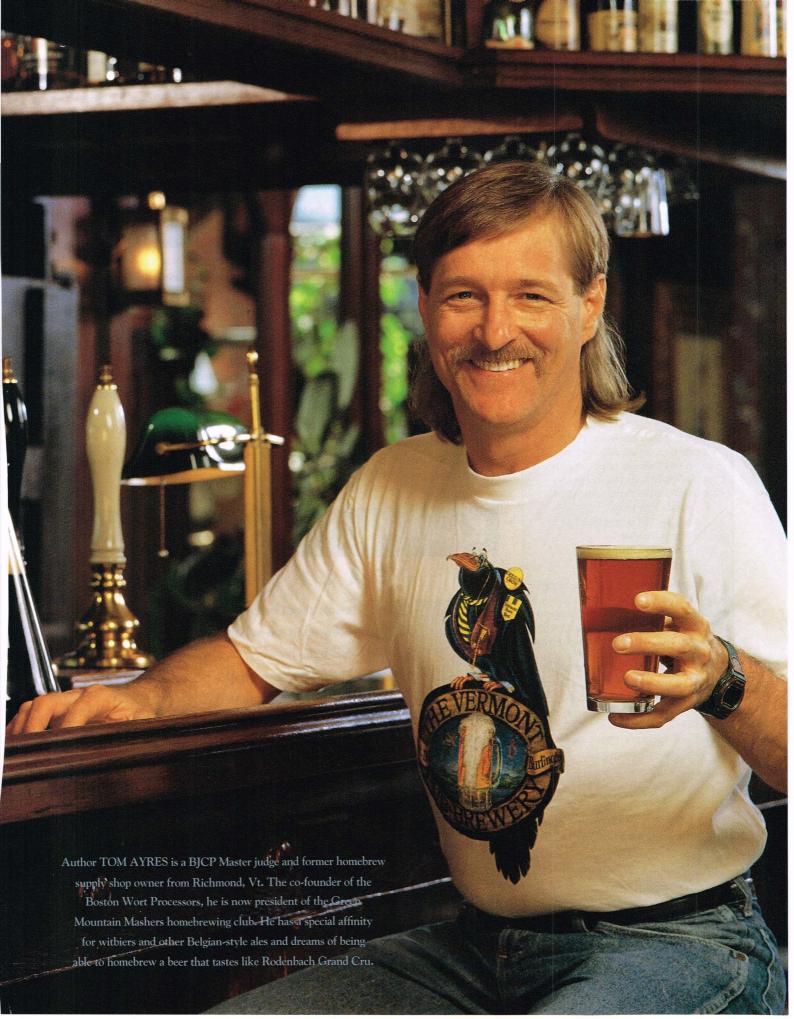
Greg offers high praise to a handful of pioneers, both homebrewers and microbrewers, who started spreading that message in the 1970s, when he first began experimenting with homebrewing.

"Fred Eckhardt, Byron Burch and Charlie Papazian are the three people who really revived the interest in homebrewing in this country. I admire them for the contributions they made back then and that they've continued to make over the years," he notes. "I can remember talking to Fred back in about 1978. He was editing his own brewing newsletter then — a labor of love — and he joked that there were these hippies in Colorado who wanted to start a homebrewing magazine. He laughed and wished them lots of luck!"

Greg also credits the homebrewer-founders of microbreweries such as Palo Alto



PHOTOS BY JACK ROWELL





This is an extract and specialty grain homebrewed version of one of the most popular beers served at the Seven Barrel Brewery, a brewpub

that Greg and his wife, Nancy, operate in West Lebanon, N.H. Greg offers an alternative version for all-grain brewers.

"The synergy of the Cascade and Perle hops creates a whole new floral and spicy flavor," Greg says of the India pale ale. "Even with more than three ounces of Cascade in the brew, their characteristic flavor is modified by the Perle to give a much more traditional and complex hop flavor and aroma."

Ingredients for 5 gal (19 L) Water Treatment

To soft water add:

- 2 tsp gypsum (15 g)
- 1 1/2 tsp Epsom salts (5 g)
 - 1/4 tsp kosher salt (1g)
 - 3/4 lb CaraPils malt (0.34 kg)
 - 1/2 lb crystal malt (0.23 kg)
 - 7 lbs light dry malt extract (3.12 kg)
- 2 1/2 AAUs Cascade hops (45 min.)
- 3 1/2 AAUs Cascade hops (45 min.)
 - 6 AAUs Cascade hops (30 min.)
- 2 1/4 oz Perle hops (64 g) (finish)
 - 1/4 to 1/3 oz of fruity, estery ale yeast (7 to 10 g)
 - 1 oz Cascade hop pellets (28 g) (dry, secondary)
 - 3/4 cup corn sugar (177 mL) (to prime)

Put the crushed grains in a nylon or muslin bag and suspend it in the brewing water in the kettle. Begin heating the water on the stove. After 20 to 30 minutes and before the liquid reaches 170 degrees F (77 degrees C), lift out the grain bag, squeezing as much liquid from it as you can. Stir malt extract into the kettle until dissolved then boil for 45 minutes. Add hops at prescribed times. Then chill the wort, pitch yeast and ferment at 70 degrees F (21 degrees C). After one week transfer to secondary and dry hop.

After two weeks of further conditioning in secondary, bottle with corn sugar.

For all-grain brewers

Eliminate the malt extract. Instead, combine the specialty grains with

8 lbs of pale malt (3.6 kg)

Mash at 153 degrees F (67 degrees C) for one hour, sparge.

- · Original specific gravity: 1.052
- · Final specific gravity: 1.014
- IBUs: 70
- Alcohol content: 4.9% by volume (3.8 by weight)

Brewing, Bell's and Catamount with having the courage and entrepreneurial spirit to take on the megabrewery monolith with their distinctive, regional products.

"The microbrewery movement was created, started and fermented by homebrewers. I'd warrant 75 percent of the microbrewers in the early days started out as homebrewers," he asserts.

He voices some concern about the impact of big money in today's microbrew marketplace, yet he's convinced there is still plenty of room in the business for the homebrewer with a dream, a modest budget and a willingness to work hard.

"It would be a shame if homebrewers felt locked out by the changing economics, because they're really responsible for the growth of craft brewing to date. Just because big money has entered the scene doesn't mean someone who starts off with fivegallon batches and moves up to reconditioned dairy-tank fermenters isn't going to make it. That's something the door is always open to," Greg avows, citing the success of fellow Vermont pub brewer Tim Wilson of

the Jasper Murdock Ale House at the Norwich Inn to underscore his point.

Homebrewing, Greg insists, is still a great proving ground for anyone with a hankering to turn professional. "Just about everything I learned as a homebrewer has been applicable in my craft-brewing role. Professional brewing requires greater attention to detail in areas related to consistency, like yeast management, filtering and packaging. But the essential elements are the same," he says.

More than anything else, Greg marvels at the wealth of resources readily available to brewers of all levels and abilities today, hobbyists and professionals alike. It's a major departure from his days as a neophyte fermenter 20 years ago.

"With resources like the American Homebrewers Association, national magazines and with the Internet as an instant communication tool, there's never before been a time when someone can brew with such a great availability of equipment, ingredients and information," Greg says.

"It's a great time to be brewing, so get to it!" ©1996 Tom Ayers

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84

"Can it really be any good?" a young woman whispered. "Heavens no," Thomas exclaimed. "He's never brewed a drop in his life."



Thomas brought a gift of his latest micro-brew discovery that he wanted everyone to try. I decided that this would be a dramatic moment for me to make my debut. To the amazement of all of my friends, I strode confidently over to my Alephenalia Micro Brewery-Home Brew Kit and began to pull out the professional looking bottles that I had placed there.

"Chuck is up to his old tricks," somebody chuckled. The crowd laughed. They were all certain that I couldn't brew any more than I could make potatoes au gratin.

"Can he really brew?" I heard Thomas' partner whisper. "Heavens, no!" Thomas exclaimed, "He's never brewed a drop in his life. But just you watch him. This is going to be good."

I decided to make the most of the situation. Holding up the wing capper, I explained that I had bottled it just for this occasion. With mock dignity, I drew out a bottle and cradled it in my arms like a great wine. "Is this another of those disappearing ink trips," called a voice from the rear. The crowd rocked with laughter.

Then I began to pour.

Instantly a tense silence fell on the guests. The laughter died on their lips as if by magic. I poured a glass for everyone, even those who exclaimed "I don't like beer." I heard a gasp of amazement. My friends sat breathless, spellbound.

I sampled it myself and for a brief moment I forgot the people around me. I forgot the hour, the place, my fellow imbibers. The little world I lived in seemed to fade-seemed to grow dimunreal. Only the ale was real. Only the ale and the visions it brought me. Visions as beautiful and as changing as an autumn sunset, with its amber hues, just like my homebrew.

A real Triumph!

But When They Tasted My Pale Ale!—

As everyone finished tasting, the room resounded with accolades. I found myself surrounded by excited faces. How my friends carried on! Men shook my hand-wildly congratulating me-pounding me on the back in their enthusiasm! Everybody was exclaiming with delight, plying me with rapid questions. Chuck! Why didn't you tell us you could brew like that? Where did you learn? How long have you been brewing?

"I simply followed the complete instructions included with the Alephenalia Homebrew kit," I replied. "And just a short while ago, I didn't know hops from malt."

"Quit your kidding," laughed Thomas, a real beer enthusiast. "You've been brewing for years. I can tell."

"Only since Rosie gave me an Alephenalia Microbrewery for my birthday, less than three weeks ago. I decided to keep it a secret so that I could surprise all you folks." Then I told them the whole story. "Ever heard of Liberty Malt Supply Company?" A few of my friends nodded. "That's a home brew shop and mail order catalog!" One of the oldest in the entire country!

"Exactly," I replied. "They have a great program for learning how to brew beers like a professional, the Liberty Way."

How I learned to brew without a teacher.

And then I explained how for years I had longed to brew my own beer. I shared that dream with Rosie and when she saw the Alephenalia Microbrewery in the Liberty catalog, she knew it was the perfect gift for me.

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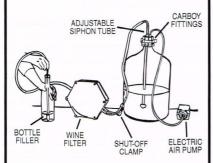
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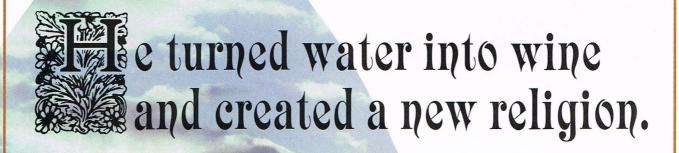
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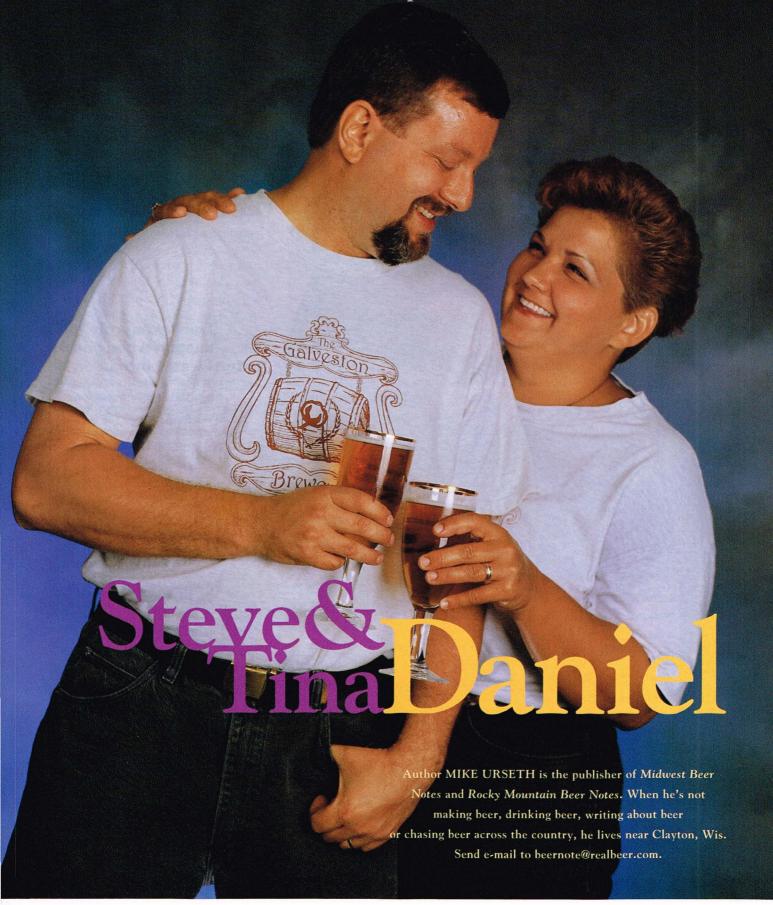
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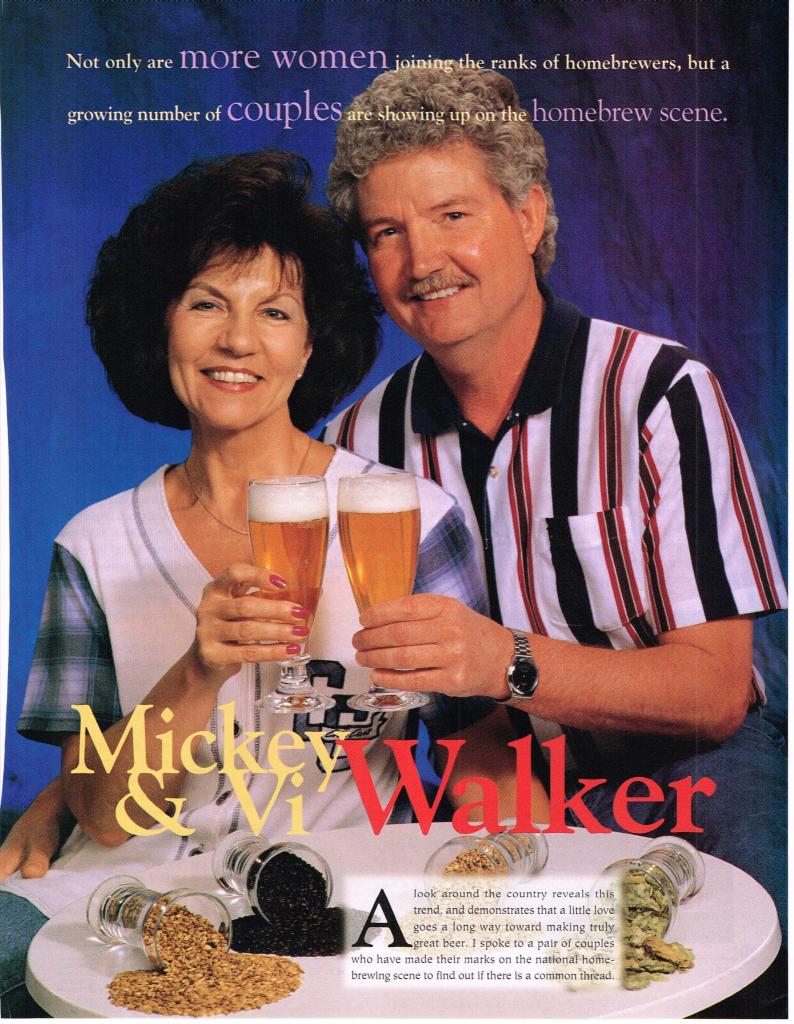
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AHASP



The Stereotypical image of the lone homebrewer (complete with mandatory facial hair) toiling over the brewpot is undergoing some radical changes.





Steve and Tina Daniel of League City, Texas, have their own version of the "homebrew by two" story. Steve began brewing before he met Tina, although his early efforts were less than spectacular. He had followed the advice of a homebrew shop clerk in Ohio and added massive amounts of white sugar.

"It tasted like paint stripper," Steve laments. In fact, it was so nasty he left a full case behind when he moved to Texas. The way Steve tells it, there were two turning points in his brewing career. The first was discovering DeFalco's homebrew shop. "They gave me great advice and they even had homebrew on tap in the store so you could taste what you were going to make." The second turning point was meeting and marrying Tina.

At first Tina would have nothing to do with Steve's homebrewing hobby. In fact, she found the smell of boiling wort rather repulsive, especially when she was pregnant. But she discovered that some of Steve's beers were really good. Tina says she likes the sweeter beers, like brown ales, fruit beers and doppelbocks, but if Steve had his way he'd make nothing but Pilseners.

"I'm more of the technical guy," Steve says. "I suppose it's because of my chemistry background. Tina provides more of the creative and artistic side to our brews."





"And the muscle!" Tina adds.

When questioned about division of labor on brew day, it became clear the Daniels view themselves as interchangeable parts of the team. They each know and handle all aspects of the brewing process, although Tina insists she does more of the cleaning.

What makes Steve and Tina's beers so good? They've won a pile of medals in local and national competitions, including

Above: Galveston Brewing Co.'s brewhouse, which lies on the far side of a gameroom. Left: The Daniel's toast the many awards they have won in homebrew competitions.

gold medals in the AHA Nationals for altbier in 1988, 1989, Munich Helles in 1991, and a silver in 1990 for altbier.

"Clean, clean, clean," is Steve's answer.
"I'm a big proponent of bleach as a cleaning and sanitizing agent for the homebrewer," he says.

Tina thinks filtering has made the biggest difference, especially when it comes to competition. They use a cartridge filter called The Kit. Its pleated polypropylene filter is precoated with brewing-grade diatomaceous earth. The clear, bright beer puts the judges in the frame of mind that "this could be the one" before they ever taste it. Is there a difference in the Daniels' beers because they brew as a couple?

Both Steve and Tina answer emphatically, "Yes!"

"I get Steve to try new recipes, things he hasn't done before," Tina says. "He would never make a fruit beer if I didn't push him that way."

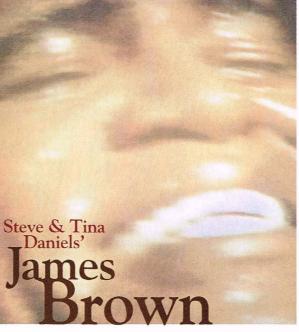
Steve has a little differént take on it, "Together, we are both more than we would be alone. There's a synergy when we work together." The synergy has become even more apparent in their work together at the Galveston Brewing Co. in Galveston, Texas. They have joined forces with Steve's lifelong friend and homebrewing

Ingredients for 5 gal (19 L)

- 10 lb domestic two-row pale malt (4.5 kg)
- 1 1/4 lb Belgian CaraVienne malt (0.6 kg)
- 3/4 lb Belgian CaraPils malt (0.3 kg)
- 1 1/2 oz Belgian chocolate malt (42.5 g)
- 4 1/2 HBU British Kent Goldings hop pellets
 Wyeast No. 1098 British ale liquid
 yeast culture in a prepared starter

Dough-in about 1 quart hot water per pound of malt. Hold at 154 degrees F (68 degrees C) for 90 minutes. Sparge to collect 5 1/2 gallons (20.8 L) and bring to a boil. Add hops and boil for 60 minutes.

Force cool and pitch with starter. Ferment at 65 to 70 degrees F (18 to 21 degrees C) for three to four days. Rack and allow to settle for two weeks at 50 degrees F (10 degrees C). Prime with one-half cup of corn sugar. This is a scaled-down version of a seasonal beer now served at the Galveston Brewery. Brewed in honor of "The Godfather of Soul" himself, James Brown Ale went on-line on his birthday, May 17. It is one of Tina's favorite beers — sweet, smooth and full-bodied, similar in style to a northern brown ale.



conspirator Steve Roberts and his wife Bonnie to literally build a brewpub "the po' folks' way," they say. The brewing system was fabricated from used dairy tanks. The two couples took the sweat equity concept to extreme, right down to Tina sewing the seat covers for the bar stools. The pub has been well-received, recently voted best brewpub in a local poll.



Mickey and Vi Walker

ickey and Vi Walker of Fargo, N.D., are another example of the brewing-together trend. Since Mickey was bitten by the homebrewing bug in 1990, he and Vi have shared brewing duties and credit for some of the best homebrew in the country.

Mickey's interest in homebrewing was sparked by his father's tales of making homebrew and moonshine during the Depression. He carried this interest buried in his consciousness until a co-worker regaled him with tales of illegally making homebrew in Saudi Arabia. Mickey brought home a "how-to" pamphlet, a couple of cans of Munton and Fison malt extract, dry yeast, Cascade hop pellets, and told Vi he was about to make some great beer.

At first Vi had mixed feelings. After all, she didn't drink beer. In fact, she didn't really like beer. Mickey assured her this would

change once she tasted some beer with real flavor. So they began. Vi dug out the 16-quart stainless-steel pot she used to make salsa, and Mickey went over the details of the recipe. He realized one of the cans of extract was already hopped, but figured that would be no problem. Because the pot wasn't big enough to hold five gallons, they boiled a partial batch. About the time the boil was finished, Vi's brother dropped by. The brewpot was set out on the deck to cool for several hours. No counterflow, quick-chilling here.

They pitched a couple of packages of dry yeast and waited for beer. Once fermentation stopped ("it seemed like it took forever") the intrepid new brewers bottled and waited again. After five days they tasted their creation. Mickey figures he must have utilized every bit of alpha acid from the hops because the beer was intensely bitter. In spite of the overhopped condition, Mickey and Vi were sufficiently pleased with the result and vowed to brew again.

Their beers improved rapidly with experience. After the first couple of batches using extracts with partial mashes, they made a discovery that changed their brewing lives: the Prairie Homebrewing Companions. The local club was packed with brewing energy. Several charter members were science types, employed at nearby North Dakota State University. A feature of the club is a well-stocked yeast bank, providing clean, healthy cultures to club members.

Mickey and Vi joined the club and began using liquid yeast. The beers improved immediately. Because of the club, they began to enjoy brewing even more. More advanced brewers offered advice and assistance. When Mickey decided to make the move to all-grain, PHC stalwart Carl "Cascade" Eidbo volunteered to guide them through their first batches.

While researching equipment for allgrain brewing, Mickey came to the conclusion that five-gallon (19-L) batches were too small. For the same amount of work, a larger system would provide a better return of beer. With that in mind he ordered a 15gallon (56.8-L) brew kettle with 10-gallon (37.8-L) mash/lauter and hot liquor kettles from Brewers Warehouse of Seattle. He laid out the system as a three-tier gravity-feed setup to minimize lifting. Vi was happy to move to the new brewing system. Their first attempt at a full-batch boil nearly destroyed the kitchen range, so the move to the basement brewery was overdue. The propane burners were converted to natural gas and a high output fan installed to vent steam and combustion vapors.

Then the brewing got serious.

Although Mickey was the instigator in all these improvements, Vi admits she was "easily led astray." As the pair's brewing skills increased, a division of labor developed. Mickey handles recipe research and formulation. He gathers and measures the ingredients while Vi prepares the water supply, filtered via a reverse osmosis machine. Fargo water changes throughout the year, so the machine gives them a consistent starting point. Water treatments match the water specifications of the classic brewing sites of each style.

The night before brewing, they fire up the "Monster Mill" and crush the grain. Like many beginning all-grain brewers, Mickey and Vi found the prospect of cranking 20 or more pounds of malt by hand was not invit-



The Walkers' homemade "Monster Mill."



Mickey and Vi won the Best of Show trophy at the Minnesota Brewfest at Sherlock's Home in Minneapolis in October 1995.

ing, so research began. An article in Zymurgy Special Issue 1992 "Gadgets and Equipment" (Vol. 15, No. 4) gave them the idea that a better mill could be built than was commercially available. Mickey's brother ran a veneer mill in Oregon and recommended one of his millwrights as a man who could build anything. Copies of the Zymurgy article, "Building a Roller Grain Mill" by Wayne Greenway and Russ Wigglesworth, and photos of commercial mills were sent west.

When the mill arrived, their only response was "Wow!" Stainless-steel rollers four-inches in diameter and 12-inches long were driven by a hefty electric motor via big roller chains. The mill crushes grain at an alarming rate, but the crush is always excellent. Some see the mill as another example of "out-of-control" homebrewing, but Vi is philosophical.

"Every hobby has its price. Golfers need those graphite clubs and fishermen need the boats and gear. Pay to play," Vi says. As far as brewing equipment goes, Mickey follows the philosophy that anything that makes things go easier on brew day will eventually lead to better beer. One of his favorite additions to the brewhouse is quick-disconnect fittings on all the hoses. Though seemingly a small thing, they speed the process and increase the certainty that transfers and sanitizing procedures go on schedule.

The Walkers have gone a step farther, investing in the new Great Northern Brewing Co., a brewpub in downtown Fargo. Mickey pronounced himself cured of latent aspirations to be a commercial brewer after spending a day working with fellow PHCer, Ray Taylor, in Great Northern's filtering operation. "I had sore muscles in places I didn't even know I had muscles," Mickey says. "Homebrewing is fun. Commercial brewing is hard work."

On brew day, Vi's first responsibility is to fire up the "brew light," an Old Style tavern sign emblazoned with toasts in several languages. This sets the mood for brewing. Mickev fires up the burners and brewing starts in earnest. Both brewers know the other's role. Mickey credits Vi with saving the brew on several occasions when he was paying more attention to his guests than to the beer. She monitors hop additions, checks starch conversion and monitors temperatures. She also handles feeding the troops. They are firm believers in the motto of the Prairie Homebrewing Companions: It takes beer to make beer. Mickey deals with the mechanical aspects of routing hoses and the like. He is primarily responsible for the fermentation as well. They have an unspoken communication that moves them smoothly through the counterpressure bottling

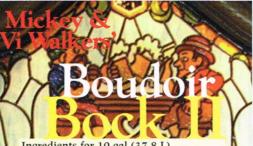
process as if it were a ballet.

Would Mickey still be brewing if Vi were not such an integral part of the process? "Probably not as much," he says. "Something would be missing. We both have so much fun at it. It's a great activity, especially during those long, cold North Dakota winters." Vi has become more enthusiastic as her beer knowledge has grown. She also discovered that Mickey was right about his early assertion. Once they started making good beer, she found she really liked the stuff. "I've found many women who thought they didn't like beer," she says, "until they taste our homebrew."

When they began brewing, Vi didn't know there was such a thing as homebrew competitions. She is now an avid and successful participant. Along with many prizes from local and club competitions, the Walkers have carted off an array of prizes from regional and national competitions. In 1994 and 1995 their Bohemian Pilsener garnered silver medals in the AHA National Homebrew Competition. In what they call their proudest brewing moment, Mickey and Vi won Best of Show for a Bohemian Pilsener at the 1995 Minnesota Brewfest sponsored by Sherlock's Home, besting more than 300 entries.

When the Walkers brew together, it seems they use a little bit more than water, malt, hops and yeast. If you taste very carefully, you can detect a little love in every bottle.

So, back to the question at hand: Is there a difference when couples brew together? In this case, one plus one equals more than two, and great homebrew to boot.



Ingredients for 10 gal (37.8 L)

24 1/2 lb Belgian Munich malt (11 kg) 3 1/2 lb two-row Pilsener malt]

(1.59 kg)

- 1 lb CaraVienne malt (0.45 kg)
- 1 lb CaraMunich malt (0.45 kg)
- 1/4 lb chocolate malt (0.11 kg)
- 25 IBUs Hallertauer hops (bitter)
- 1/2 oz Hallertauer hops (14 g) (flavor) Wyeast No. 2308 Munich lager liquid yeast culture Force carbonate in keg
- Original specific gravity: 1.080
- Finial specific gravity: 1.026
- Boiling time: 90 min.
- Primary fermentation: three weeks in glass
- Secondary fermentation: two weeks in glass
- Tertiary fermentation: six weeks in keg

This is a triple-decoction mash as described in Brewing Lager Beer (Brewers Publications, 1986) by Gregory Noonan. The main mash rest temperatures are at 100, 122, 149, 167 degrees F (38, 50, 65, 75 degrees C). The mash cooker rest temperatures are 122, 149, 160 degrees F (50, 65, 71 degrees C). Mickey and Vi look forward to drinking this high-gravity German lager in front of a cozy fire during a cold North Dakota winter evening, or anytime!

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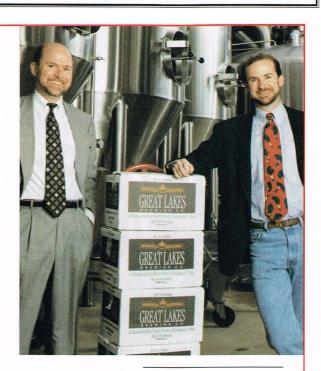
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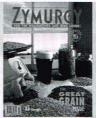
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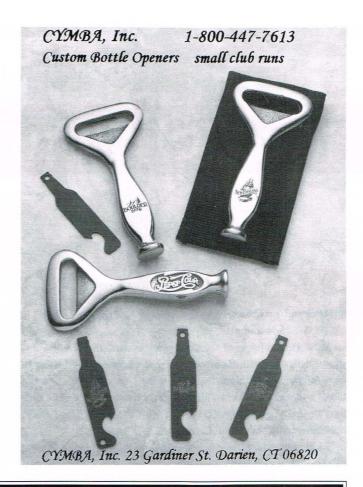
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is
the
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answer!"



ThomasO'Connor III, M.D.

om, an obstetrician-gynecologist in Rockport, Maine, is a consummate competitor. He has won New England Homebrewer of the Year twice in row, an honor requiring stylistically accurate brewing across 22 categories of beer in five regional competitions throughout the year, and 183 other national and regional awards, including five consecutive annual winners in the AHA Nationals. Tom is a BJCP Master judge and a member of Maine Ale and Lager Tasters (M.A.L.T.).

As evidenced by these accolades, Tom takes brewing to style as seriously as he takes his medical career. While working 110 hours a week, sometimes at crazy hours, one wonders how he has time to brew at all.

"Competition brewing really encourages you to brew for stylistic excellence rather than just potability," says Tom. "Creative juices still flow, but flow purposefully," he adds. "Besides, it gives you an excuse to share your beer with friends and colleagues who really appreciate the accomplishment."

Tom was introduced to homebrewing by a gifted homebrewer and repairman in 1990. "Terry had all these *Zymurgy* magazines and cans of malt extract on the table where I had brought my VCR to be fixed," Tom recalls of his chance encounter with Terry Ripple in Reading, Pa. "I asked him lots of questions, tasted some real beer and was hooked!"

From then on there was no more Keystone Light for this doctor and his wife, Mary Lisa Smyth, M.D., a pediatrician. The two met and married during Tom's ob/gyn residency in York, Pa.'s York Hospital. Tom gave Mary a homebrew kit, which they brewed together. Because Mary loves to cook and bake, the hobby was a natural fit.

Their first batch, like those of many other homebrewers, was a brown ale kit. This did not impress the self-described hop head

Mary, so Tom busied himself by brewing as often as he could, often late at night between deliveries and rounds at the hospital, to perfect his brews. Mary never really got into brewing, but she partakes of Tom's concoctions from his twin-tower six-tap True™ beer cooler in the new kitchen of their remodeled home.

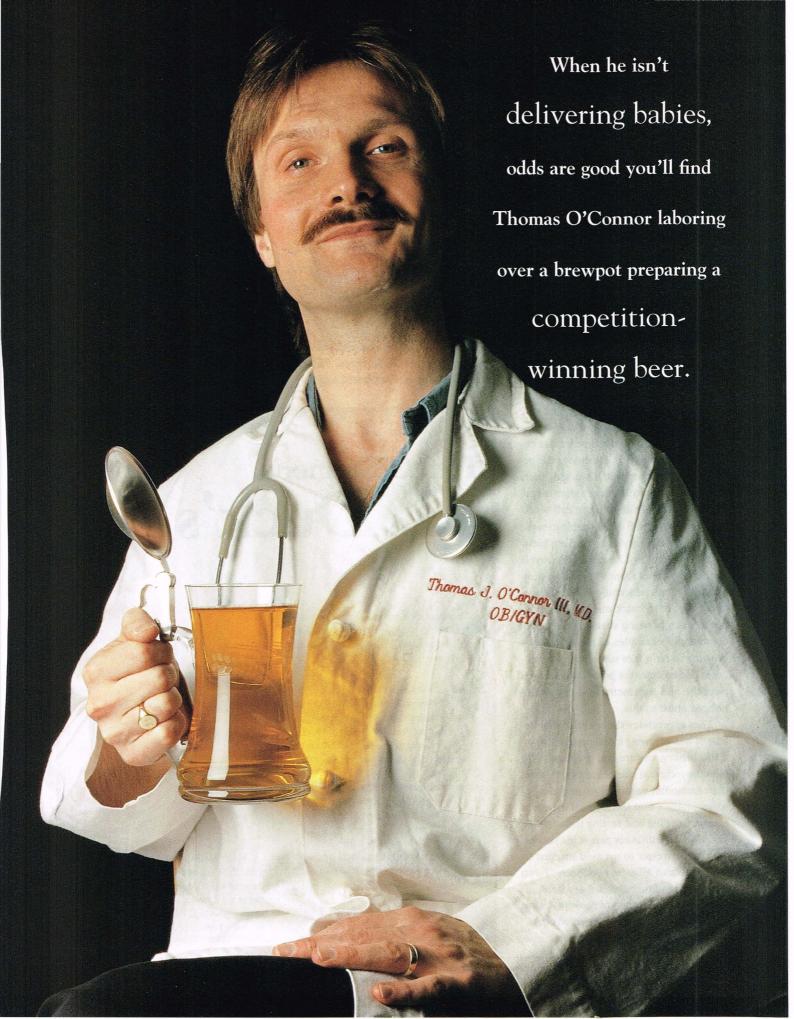
Tom and his four-year-old son Thomas sometimes brew together in the guest cottage on his property above Rockport Harbor. The property has a view of the lighthouse on Indian Island and Penobscot Bay. (Tom's youngest son, one-year-old James, isn't interested in brewing quite yet.) Tom uses a plastic Bruheat mash tun and boiler, then cools the hot wort with a copper counterflow chiller. He has accumulated about 24 glass carboys for fermentation and uses 18 kegs for secondary conditioning, aging and serving.

Tom filters many of his beers with a Marcon setup and kegs all the beer he serves on tap. He bottles his competition entries with a Benjamin Machine Products counterpressure bottle filler. Not surprisingly, Tom is meticulous about sanitation, and doesn't believe he has ever suffered a bad beer caused by infection. Not bad for 12 years of college at Tulane, Tufts Medical School and a residency.

His medical training, of course, gave Tom all the tools necessary to understand and enjoy the secret workings of yeast and bacteria. He also occasionally prescribes a remedy for post judging headaches after homebrew competitions: four ibuprofen and all the water you can drink before bed and immediately upon awakening.

Tom's attraction to brewing was born when he tasted Terry Ripple's homebrews on that fateful autumn day in 1990. "I simply had no idea that beer could be delicious. To taste hop flavor, the complexity of malt chewiness and hop bitterness balancing each other, the pheromonelike hop aroma all for the first time — I was converted!"

Author BRUCE P. STEVENS of Winthrop, Maine, is a sales representative for a waste water treatment equipment consultant. He is also vice president and treasurer of Cask and Hive Winery, makers of Maine hard ciders and meads. Bruce is a BJCP National judge, the M.A.L.T. special purchases coordinator and in his spare time fly fishes and hunts.





Brew room with a view: Tom's brew cottage, home to his 24 carboys, 18 kegs and the rest of the related gear, overlooks a lighthouse in Penobscot Bay.

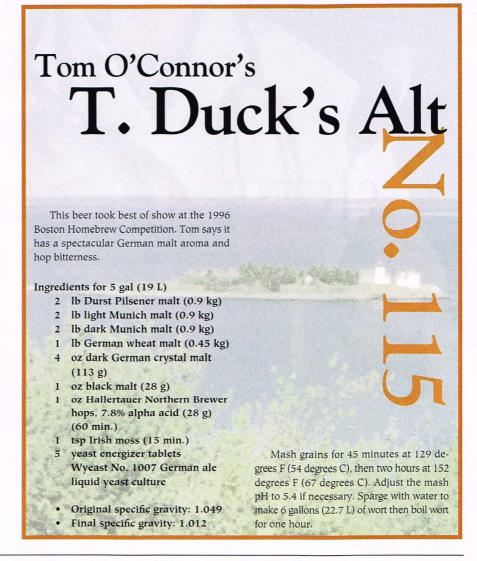
reading Charlie's [Papazian] first book [The Complete Joy of Home Brewing (Avon, 1984)] cover to cover and then boiling up a kit beer. I then added one new variable or technique at a time, learning and experiencing the impact of each. Even today, 183 ribbons later, I still 'listen to my beer;' relax, don't worry, have a homebrew; and have fun at it."

His fascination with fermentation has led him to explore the limits of homebrewing by making award-winning ciders and meads, too. His blueberry mead is as complex and beguiling as some of the finest Côte du Rhône. The sparkling Maine cranberry cider on tap is quite refreshing. Tom hopes to toast the victories of one of the Boston-area professional sports franchises with some sparkling raspberry-blossom mead, but it may be a while. In the mean-

Tom is not a big beer drinker because alcohol reduces his ability to stay awake during the limited family time he has before the kids go to bed. He enjoys the occasional competition with his judging peers so he can enjoy a few more than usual when the pressure of being on call is off.

The creative thrill of being able to make so many different styles keeps Tom brewing five-gallon (19-L) batches. He revels in the late hours from 9 p.m. to 4 a.m. when he brews peacefully in the cottage. Tom plans each batch and makes a couple at each brewing session. He tastes commercial examples of the style he is brewing to help him understand its nuances. He executes the prime directive with panache and succinctness — those 183 ribbons attest to this.

Tom appreciates the multifaceted details of homebrewing for its perspective on world history, culture and geography. He likes the technical side of brewing to style, the ceremonial nature of tasting the finished product and the sensual aspect of seeing, smelling and tasting the complex beverage. He attributes part of his success as a homebrewer to an avid interest in learning about all aspects of beer. "I own and have read just about every book offered by the Association of Brewers (except the primarily commercially-oriented ones)," Tom says. "I started out like everyone else,





When Tom remodeled his kitchen he did what any homebrewer would — he included a twin-tower six-tap True™ beer cooler.

time, that raspberry-blossom mead will age in his conditioning refrigerator.

Tom and Mary budget \$125 per month for commercial beer examples and home-brewing supplies, but say they frequently go over to accommodate tastings they organize for friends and colleagues. They estimate they've spent several thousand dollars in the last few years on supplies, gadgets, beer-related travel and competition entry fees.

Tom suggested this quote to summarize his brewing philosophy: "The essence of brewmastery is in the control of myriad variables, guiding your ingredients and process to accomplish a stylistic goal that still maintains the brewer's unique creative interpretation of the style." Or to use an analogy, "to sail you need only to sit in a boat and be blown by the wind, but to be a sailor you need to trim your sail, adjust your rudder, pick a point on the horizon and go for it!"



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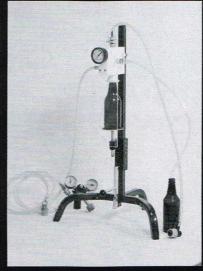
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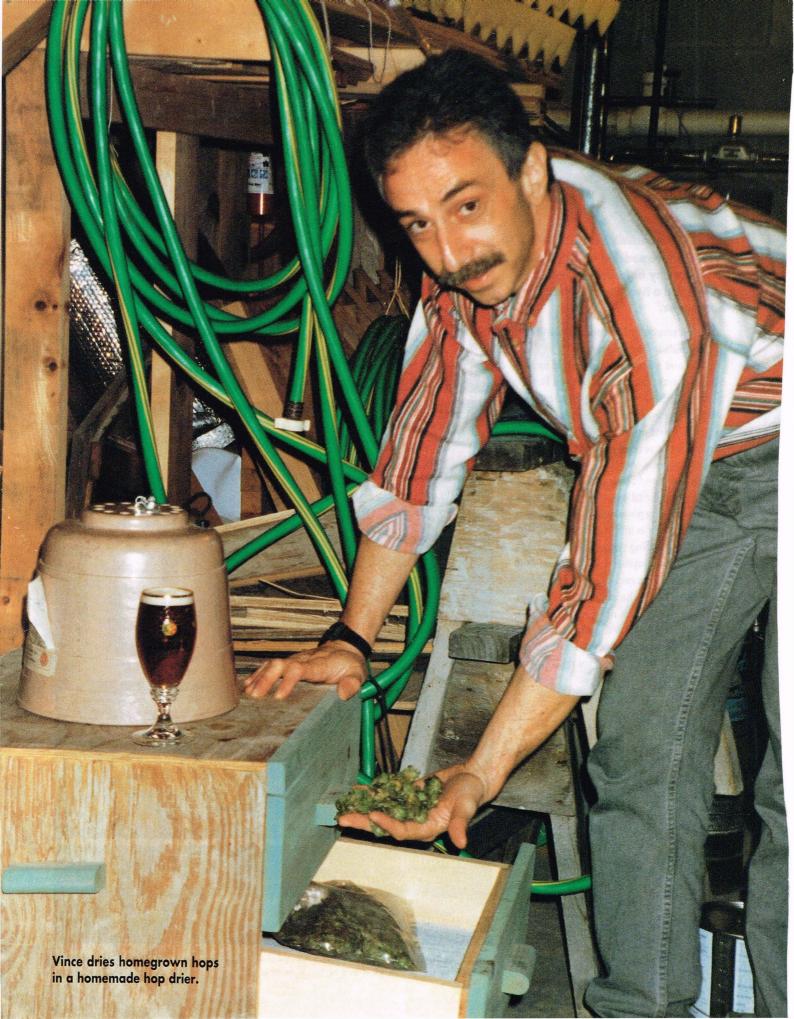
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Author BILL METZGER edits and publishes Great Lakes Brewing News. Author BILL METZGER edits and publishes Great Lakes Brewing News.

ince Oliverio lives in a self-built log cabin near the village of Ellicottville in western New York. The house overlooks a beautifully hilly area, although once summer arrives that view is partially blocked by the trellis of hops Vince grows over his porch.

Vince lives with his wife Jean and two sons, two-year-old Nick and 10-month-old Eric. Jean was born in England and the couple visits the island and the European continent whenever possible. Each time they return, he brings back more souvenirs for the bar he constructed in his basement. He has two hand pumps, one of which he sets up and uses for outdoor parties in the warmer months. The bar is decorated with posters, beer bottles, coasters and old brewing company trays. Near the bar are two refriger-

ators, one with two functioning tap handles, where Vince stores homebrew that is ready to drink. Above the bar hang five AHA award certificates he won in the 1995 National Homebrew Competition (a gold, three silvers and a bronze).

As is common with homebrewers, Vince's all-grain system is set up in the basement. It's a three-tier, 10-gallon, self-fabricated brewery bearing several original constructions to make homebrewing easier and more efficient. Around the corner is a hop drying setup.

Here's what Vince Oliverio has to say about his hobby and life:

(Vince pours a German-style altbier and we drink.) When did you start homebrewing?

I started with a bag kit in the summer of '92. Although I detest bag kits now, at the time we thought it was great beer.

Where did you encounter your first homebrew equipment?

At an archery, bait and tackle shop. They also sold homebrew supplies. That, of course, was after my wife gave me the brew bladder for Christmas. (Vince motions to the bar and immense tap system around him.) She's responsible for this whole thing!

Why do you like homebrewing? What motivates you to homebrew?

I've always liked beer, and brewing is a good blend of art and science. You need to be accurate, but brewing allows for creativity. I also like making different types of beer that aren't commercially available. As far as motivation, brewing is a kind of magical process, steeped in history. It's a part of civilization. It probably kept people going. Also, I get satisfaction from the delicious brews I can create. It's something you can put your signature on, an exten-

sion of yourself. It's also satisfying to do something from start to finish.

In addition to beer,

Vince Oliverio makes Music,

homebrewing gadgets and

encourages young people to make

the most of their lives.



Mash-o-laut Plans

The mash-o-laut, a pivotal "false bottom," allows you to mash and lauter in the same kettle. Start the mash with the mash-o-laut in the up position so you can apply heat to the mash and stir to prevent scorching. When you are ready to mash-out, lower the pivoting false bottom with a stir paddle and sparge. No wort transfer means no oxidation and less work. The mash-o-laut can be constructed in about an hour.



- 1 1/2 barrel stainless-steel keg
- 1 6" stainless-steel pipe, male threads on both ends
- 1 1/2" ball valve
- 1 brass T, all female threads
- 2 1/2" brass elbows, male/female threads
- 2 3/4" x 1/2" nylon hose fittings
- 1 18" or 24" flexible copper hot water connector
- 1 3/8" compression x 1/2" male pipe
- 3/8" outside diameter plastic tubing long (enough to reach the bottom of the wort collection vessel)



Mash-o-laut in the up position for mashing.

To the 3-inch stainless-steel male drain inside the kettle attach a 1/2-inch brass T with female threads. To each side of this T thread a 1/2-inch brass 90-degree elbow with male and female threads. To this, thread on the nylon 1/2-inch by 3/4-inch hose fittings. This is the pivot portion. To the 3/4-inch male threads attach the 3/4-



Mash-o-laut in the down position for lautering.

inch flexible hot water connector. Bend it into a U shape first. Once this is in the kettle bend it to fit the bottom of the kettle's contour. After it is bent to fit, remove it and cut slots with a fine-blade hacksaw about one-third to half way through the pipe in every crease so the slots will face the bottom of the kettle. When shopping for the hot water connector find one with nylon or PVC washers. Avoid rubber ones, which may impart an unpleasant taste to you beer. You may need to cut ringlike shims from 3/4-inch copper tubing for a tighter fit between the nylon hose fittings and the hot water connector.

When you are ready to mash have the pivotal false bottom in the up position against the kettle wall. If the pivot motion is too loose add Teflon tape to those threads before your next mash. To mash-out simply lower the mash-o-laut with your stir paddle and let the mash settle for about 10 minutes before sparging. At this time attach a 1/2-inch male pipe by 3/8-inch compression fitting to the 1/2-inch ball valve drain on the kettle. Attach 3/8-inch outside-diameter plastic tubing long enough to reach the bottom of your wort collection bucket or kettle to the 3/8-inch compression fitting. When it is time to sparge, open the ball valve completely to initiate flow, then taper the flow so the sparge lasts 45 to 60 minutes. In the event of a stuck runoff, restart the flow with a puff of air or CO₂ in the outflow hose.

When and how did you develop your taste for quality beer?

It evolved, but it began on my first trip bicycling along the coast of England. We'd stop at the pubs for directions, bike 60 miles and drink four pints. Let's see, that makes it 15 miles per pint.

Not bad mileage, is it?

No. Of course we also had to fill up the tank every evening.

(We drink Vince's American pale ale.) Nice beer.

Thanks.

What's your educational background?

I have a bachelor of science degree in environmental science and a master's degree in counseling.

What is your day job?

I am a guidance counselor for a local school district's special education students.

How long have you been counseling?

Nine years. Before that I did odd jobs. I went to graduate school to learn to teach science, but turned to counseling because I liked a counseling course I took better. I like kids, especially high-school age. I work with them to set goals for high school and beyond.

How much time do you spend homebrewing?

I brew once a week or so, but sometimes go on three-week stretches without brewing. My wife supports my hobby by watching the kids while I brew and by critiquing my beers.

When do you brew?

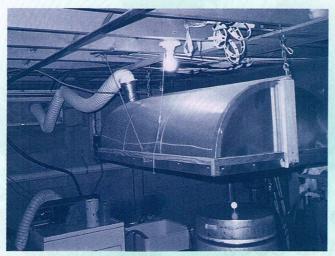
I try to brew right after work, in the late afternoon. I mash-in and brew in five hours. I brew a lot on rainy days, of which there is no shortage in western New York.

What kind of beer do you brew?

I like moderate- to low-alcohol beer that is tasty and interesting. This allows me to have a few and still socialize.

(We try Vince's mild.) Mmm, nice. What's the story with this basement bar?

It stays at about 60 degrees F.



Vince designed and built this vent hood to accommodate propane-powered brewing in the basement.



A perforated copper coil serves as a sparge water sprinkler.

No, I mean the knickknacks.

Oh, I've collected them over the past four years, mostly from Italy and England. It's a part of my pack-rat behavior.

Do homebrewing and beer fit into your lifestyle?

Yes, I'm a very social person and beer is a good way to enjoy socializing. The social aspects of beer are very important. I've made some good friends from homebrew clubs.

What club do you belong to?

I belong to two: the Sultans of Swig and the Allegheny ALERS.

(We try Vince's English-style bitter). Why did you develop the pivotal false bottom you call the mash-o-laut?

I needed something to mash and do step infusions with over a burner while avoiding caramelization and scorching. The mash-olaut makes that easier than pulling out the wort. I don't have to recirculate, and it allows me to stir the wort while bringing the temperature up to the next level.

I noticed that Russian-made rifle on the refrigerator. Are people desperate for a taste of your beer or do you belong to a militia? (Laughs) Yeah, I belong to a homebrew militia unit. Want to take my picture with

I don't know, would *Zymurgy* publish that? Good point. Let's stick with the carboys.

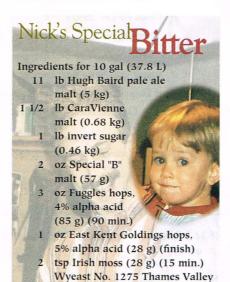
the rifle?

How many carboys do you own?

(Counts them) Ten. By the way, I've never shot the gun.

What is your typical batch size?

Ten gallons.



- liquid yeast in prepared starter

 Original specific gravity: 1.040
- Final specific gravity: 1.014

Mash all grains at 150 degrees F (66 degrees C) for 1 1/2 hours. Raise temperature to 168 degrees F (76 degrees C). Sparge with 6 1/2 gallons (24.6 L) of 170-degree-F (77-degree-C) water. Adjust sparge water pH to 5.2 with lactic acid. Boil wort 90 minutes. Adjust volume to 10 gallons (37.8 L), chill and pitch yeast. For a traditional "hand pull" dispense, prime each five-gallon (19-L) keg with two ounces of cane sugar.

What other hobbies besides homebrewing do you have?

I've been playing guitar for 20 years. I play in a blues band, The Mojo Hand.

How long have you been playing with them?

For six years. We're the only band that brings its own beer to the bars where we play. Either homebrewed beer or micros.

Do people like it?

The bar owners do.

(Vince pours a Belgian-style dubbel.) This is real good.

Thanks. I'll give you a bottle to take home.

Hey, I like this job, I'll have to ask Zymurgy if they need any more interviews done. Do you have a dream beer you'd like to brew?

No, then what will I have to brew after that?

What are your future beer and brewing plans?

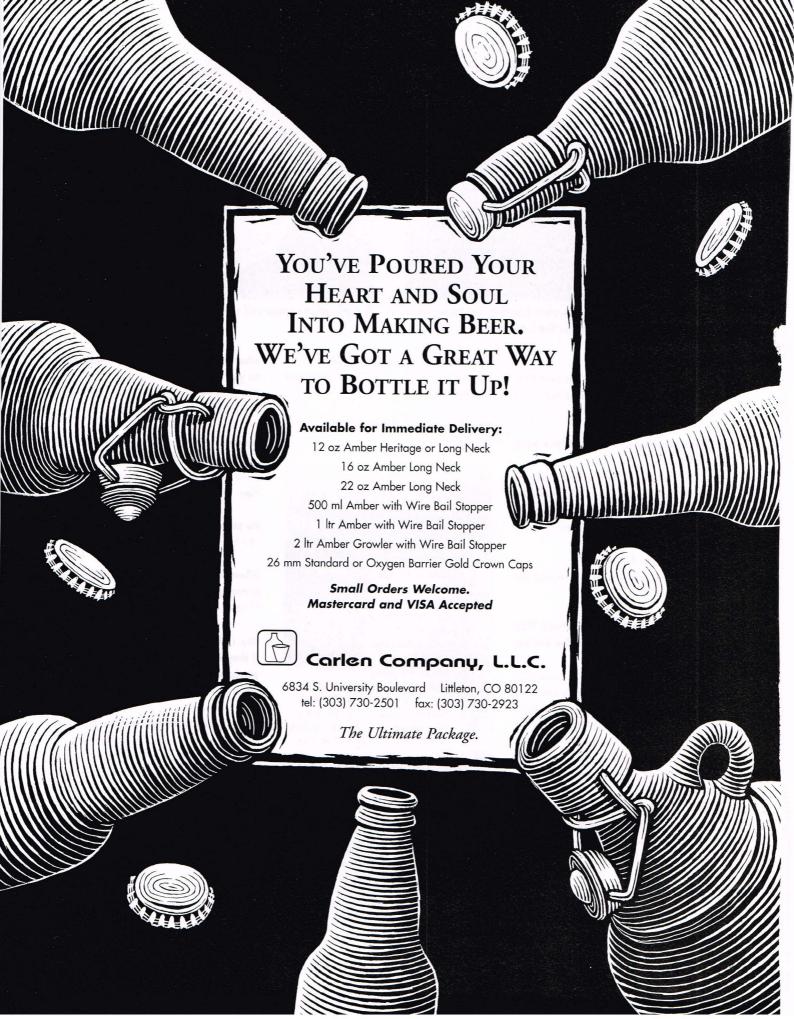
Since I'm already a BJCP Certified judge, my next beer-related dream is to become a Testigo de Cerveza. I also want to start brewing mead; I've had some very good ones!

Vince's son, Nick, comes downstairs. "Hi, Nick, you want to throw some hops into the kettle?" Vince asks.

"Yeah!" Nick replies enthusiastically.

We walk over to the empty brew kettle and Vince hands his son some hops. Nick throws them into the kettle and smiles.

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Homebrewer Award sponsored by Munton and Fison of England and the Great American Beer Festival®



John Fahrer of Omaha, Neb., took the AHA's top honor when his English bitter was chosen best of show.

ohn Fahrer had two beers advance to the second round of the AHA 1996 National Homebrew Competition, but his eye was on the alt. "I was pinning all hopes on my alt beer. It had a lot of hop character to it," John says. He considers himself more of a lager brewer and was a bit surprised when his English bitter won best of show. John owes the inspiration for his award-winning English bitter, Muddy Mo Amber Ale, to a brewer named Jack Killian who won best of show in the Douglas County Fair. "I tried Jack's beer last summer and thought, 'I need to brew this!'"

John started brewing in 1986 when a friend tried brewing and solicited John's help. He picked up a book by M.R. Reece, *Better Beer and How to Brew It*, (Storey Communications, 1978) and started brewing on his own with extract. A few years later John advanced to all-grain brewing. Byron Burch's book, *Brewing Quality Beer* (Joby Books, 1986), helped him make the switch from extract

to all grain. He has been brewing all grain for eight years and likes the results. "The quality of my beer has improved because of the freshness of the grain. I encourage brewers to get into all grain because the brewing basics are pretty much the same."

John brews five-gallon (19-L) batches from September through May with a typical year yielding 10 to 12 batches. His brewing system is simple: He uses a 10-gallon (37.8-L) aluminum pot for the mash and boils in a Bruheat, a seven-gallon (26.5-L) plastic bucket with an immersible heating element. He sparges with a Zapap double bucket lauter system and preheats the sparge water to 170 degrees F (77 degrees C). He says he has altered the ratio of sparge water per pound of grain to increase his yield, "For a typical batch with 10 pounds of grain I'll use four gallons of water to sparge. I also lower the pH of the sparge water to 5.5 or 5.7 and my yield has improved." John's primary fermentation lasts between two and three

Author CAROLINE DUNCKER, AHA project coordinator, is a homebrewer and beer enthusiast.

She plans vacations around brewpub and microbrewery locations.

days, then he racks and conditions the beer at a cooler temperature. "I have six Cornelius kegs for lagering and a refrigerator dedicated solely for that purpose."

John lives in Omaha, which is situated on the Missouri River, referred to locally as the Muddy Mo. He receives his water from the treatment plant south of town, near the confluence of the Platte and Missouri, hence the name Muddy Mo Amber Ale. Muddy Mo was brewed in November 1995. John kept the lagering temperature just above freezing so the beer was perfectly conditioned for judging. "I hardened the water by adding Burton salts for a dry, minerally finish, which worked well," says John. He only enters the AHA Nationals and the Nebraska State Fair. "I don't compete regularly and, although I have won ribbons, this is my first best of show outside of the state."

John credits four important elements in his brewing process, beyond making the move to all grain, that have improved the quality of his beers. The first is water treatment. John always preboils his water, and a water filter is on his wish list. His water is hard, which works well for beers like amber, but he adjusts the hardness depending on the style he is trying to emulate. The second element is liquid yeast cultures. "I strictly use liquid yeast and starters and will go three or four batches with the yeast before I start with a fresh one." The best-of-show bitter was the third batch on the recycled yeast.

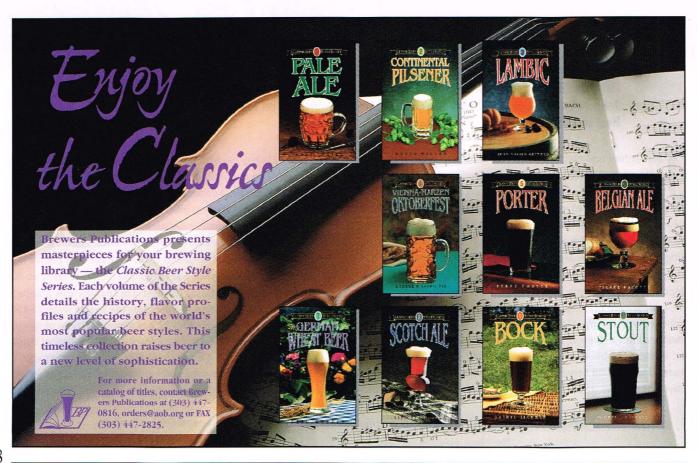
The third element is sanitation. John says he has had to dump a few batches because of sanitation problems, but not since he made sanitation a priority. He uses chlorine bleach and no longer wastes any time or effort on the brewing process without ensuring cleanliness. The fourth element is patience. "Relaxing is a big part of brewing an award-winning beer. Don't rush your beer, don't take any shortcuts or spare any expense."

John makes the most of his time as a homebrewer. "I'll start brewing a batch at 6 p.m. on Friday night and be completely cleaned up and done by 2 a.m." John brews every three to four weeks, but he is not actively involved in a club. He's busy at home with three kids, Johnny, Kylie and Jill, and his wife Debbie is in nursing school.

On Friday night, June 7, when the AHA was announcing the award winners, John was attending his son's baseball game. "I thought about going to the office that night and checking the Web page, but didn't get into the office until Saturday morning. I brought my two girls with me and the first thing I saw was 'Homebrewer of the Year, John Fahrer.' My heart was pounding so fast my girls thought something was wrong. I called my wife right away and she wanted to know what I had won," John says.

The Homebrewer of the Year wins roundtrip travel and accommodations for two to the Great American Beer Festival®. John and his wife plan on attending the GABF® Sept. 26-28 and he will be bringing a fresh batch of homebrew to share with AHA members at the Members-Only Tasting on Saturday. When asked about his plans, John reflects, "Homebrewing is an extremely enjoyable hobby, but I always have the idea of opening a microbrewery in the back of my mind. It is good to leave all my options open."

For John's award-winning recipe see page 117.



Ninkasi Award Winners

Award sponsored by Pete's Brewing Co., Palo Alto, Calif.



Tom Bergman and Chas Peterson of Jefferson, Md., won gold medals for their German dark lager and fruit beer accumulating enough points to win the Ninkasi Award.

he brewing team of Tom Bergman and Chas Peterson entered six beers in the AHA 1996 National Homebrew Competition. Of the six homebrews they entered, three advanced to the second round and two, their fruit beer and German dark lager, won gold medals. Tom and Chas earned more points than any other brewers and captured the Ninkasi high-point Award.

Although Tom and Chas have been brewing partners for the last two years, they didn't start off brewing together. Tom began brewing in 1984 and, like most beginners, he brewed with extract. He moved to all-grain brewing in the late 80s and has been brewing all-grain ever since. In 1991 he added decoction mashing to his repertoire.

Five years ago, Chas' wife Sheri met Tom in business school. One evening Chas and Sheri were at Tom's house when he served some

homebrew. Chas describes the beer now as phenolic, but at the time he thought, "Wow, this is the best beer I have ever had." Sheri thought Chas might be interested in the homebrewing hobby and bought him a kit for their wedding anniversary. It took a couple months for him to brew the kit, but once he did he was hooked.

Sheri hosted a surprise birthday party for Chas' 30th and invited Tom to brew a batch of beer as a present. Chas didn't have all the equipment yet to brew all grain, but he was interested in trying the procedure. The two men continued to brew together after that first endeavor. "We learn a lot by brewing together because no two people brew alike. Plus we are able to split batches and brew more regularly," says Tom. He describes himself as more of a "hop head" than Chas and they think they are able to brew better-balanced beers as a result of their different preferences. Although they typically brew together, each has the capacity to brew alone and Chas has just entered the ranks of partial-mash and all-grain brewing in the last year.

They brew on a straightforward system using a converted picnic cooler for mashing and a 15-gallon (56.8-L) kettle for boiling. They typically brew and split 10-gallon (38-L) batches, ferment in glass carboys for the primary and use Cornelius kegs for lagering. They brew lagers in the winter and ales in the spring and fall. Both own refrigerators dedicated for lagering. Tom recently purchased a temperature-control mechanism for his refrigerator. When asked what is his most important tool for brewing, it isn't the temperature-controlled refrigerator, but the high-quality laboratory-grade pH paper.

"We were having a problem with our beers tasting phenolic and we think it was because our pH papers were unreliable," says Chas. Tom has a pH meter, but says it is "hard to calibrate and difficult to get a good reading." They live about 30 minutes from one another so their water sources are different, ranging from more alkaline to more acidic. Once they found high-quality pH paper their problems with phenols faded and they were better able to adjust to the differences in water sources.

In the past they had entered only a few competitions and 1996 marked the second year they entered the AHA Nationals. "Our beers always scored well in competitions, they are clean, but we weren't winning awards," says Tom. Of the two beers that won gold medals in the National Competition their strawberry fruit beer was one of the first batch-

Author CAROLINE DUNCKER, AHA project coordinator, is a homebrewer and active member of Boulder, Colo.'s, Hop, Barley and the Alers. She enjoys judging in regional homebrew competitions.

es they brewed together. "It was a little harsh when we tasted it in July of 1995," says Chas, "but we decided it would be mellow in time for the National Competition. The most important element of our strawberry beer was adding the fruit to the secondary fermenter," says Chas. They used 10 pounds of frozen whole berries for less than five gallons (19 L). In addition, they added some strawberry extract at bottling. "The beer already had a good aroma at bottling because we added fruit to the secondary fermenter, but the extract helped," says Chas.

Their second gold-medal winner, the German dark lager, was intended to be a doppelbock. "We used too much chocolate malt and it came out roasty and not sweet enough," says Chas. "I went to bottle the batch and it tasted astringent so I called Tom. I wanted to dump the beer, but Tom never dumps. As you recall, his phenolic beer brought us together brewing," jokes Chas.

Chas spent some time in Germany during the winter of 1995 and brought some commercial examples of Schwarzbier back to enjoy. After tasting their intended doppelbock a few weeks later Chas thought it was a lot like

the Schwarzbier he had tasted from Germany. "You never know," says Tom. "Our dunkel ended up more like a bock and our doppelbock was more like a Schwarzbier."

Both men believe in reading everything from Brewers Publications' Classic Beer Style Series to Greg Noonan's New Brewing Lager Beer (Brewers Publications, 1996), to Dave Miller's Homebrewing Guide (Storey Publishing, 1995), to Zymurgy and both editions of Charlie Papazian's books, The New Complete Joy of Home Brewing and The Home Brewer's Companion (Avon, 1991 and 1994). They have tapped into helpful information on-line with the Homebrew Digest as well. Detailed record keeping is another important facet of their brewing.

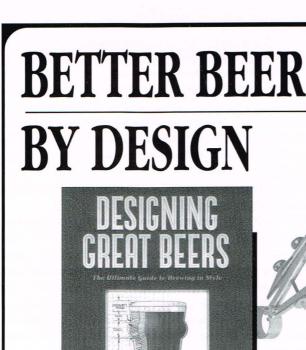
"We have never made the same beer twice." say Tom, "but we continue to fine-tune the recipe. We make an extra special bitter, Pilsener and stout pretty consistently." According to both brewers, their beers improved once they increased their pitching rate. They always use a starter and carefully reuse their yeast from one carboy to the next.

In the fall of 1995, Tom and Chas looked into opening a microbrewery in Frederick Coun-

ty, Md. They have a couple of locations in mind and have raised the money needed to build a German-style brew house complete with a fully automated computer-controlled system. "Homebrew is the ultimate incentive for investors to commit to our business," says Tom. "When someone tastes our homebrew they are sold on it." The two men don't anticipate having time for their homebrewing hobby once they start commercial brewing. "We'll have our one- or two-barrel pilot brewery that will be a little more gadget oriented than homebrewing, but it will be where we can experiment," says Tom. They plan to open the brewery in spring 1997.

The Ninkasi Award winners and Pete's Brewing Co. will work to develop a future Pete's product. The winners will receive national publicity for the award, registration at the two-week short course in brewing technology at the Siebel Institute of Technology in Chicago, a \$500 gift certificate to a local homebrew store, \$100 gift certificate for Wicked Ware Merchandise and a trip to Pete's Brewing Co.

For Tom and Chas' award-winning recipes see pages 119 and 121.



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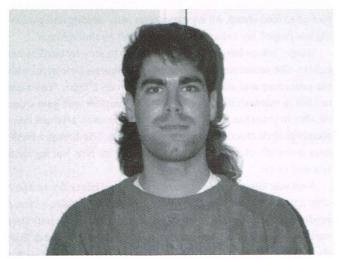
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t the Year

Award sponsored by American Mead Association, Grand Junction, Colo.



Michael Coen of Kenosha, Wis., won a gold medal for his still melomel with raspberries and blueberries.

ou don't have to follow the rules [to become meadmaker of the year]," boasts this year's winner, Michael Coen. Michael started brewing only two years ago and the mead that won best of show in the AHA Nationals was his fifth homebrewing session and very first mead. "You just have to go for it."

Michael's award-winning melomel, After Dinner Dessert, was made in February 1995. He used frozen rather than fresh fruit, generic honey and boiled for 20 minutes, techniques some in the meadmaking community may scoff at. Michael has read plenty of literature promoting fresh fruit, specialized honey sources and not boiling. Perhaps therein lies the beauty of mead — brewers can experiment.

He describes his first meadmaking experience as easy. "I've since read an article in Zymurgy Spring 1995 (Vol. 18, No. 1), "Mead Success," that talks about different fruits and processes and I'm looking into different methods with fruits." After Dinner Dessert contained raspberries and blueberries. From Michael's experience raspberries work very well for aroma character and flavor. "It turned out very sweet and not too biting — a perfect beverage for two people to share after dinner," Michael says, and thus the name.

Michael works as a yeast researcher for Abbott Laboratories in Illinois. He has the ability to propagate his own yeasts and store them in his lab at work. "My science background as a microbiologist and knowledge of sterile techniques help in brewing," says Michael. "Brewing is a natural hobby as it is related to my work. I

Author CAROLINE DUNCKER, AHA project coordinator, is a homebrewer and meadmaker.

knew I needed to supplement the honey with a nitrogen source in order to have a better fermentation, so I added yeast nutrient. This knowledge came directly from my science background," says Michael.

"For the award-winning mead I added the fruit after the boil, stabilized the temperature at 160 degrees F for 15 minutes, cooled with a wort chiller and pitched the yeast around 80 degrees F," Michael says. "I used a sweet mead Wyeast culture with an apple juice and honey starter." Michael racked the mead after two weeks and cleared with pectin enzyme. "I noticed a slight sulfur smell from the airlock, which concerned me, but it was from the yeast and it dissipated."

Michael looks forward to making more mead. "I am interested in the sparkling, Champagnelike meads. I'd like to experiment with blackberries, cranberries, grapefruit and ginger meads." He recommends asking questions and reading all the books you can get your hands on. "Zymurgy is a good tool for learning the basics of fermentation. Probably the most important advice is to experiment, try different techniques and ingredients."

When asked if he had any mead left to celebrate his accomplishment, Michael said he only had eight 12-ounce bottles remaining. He had been giving them away as presents — the mead was a great hit for Father's Day.

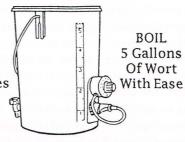
The future holds new fruit combinations, honey sources, methods and more reading for Michael. He is looking forward to traveling and visiting existing meaderies in the West. As Meadmaker of the Year, Michael is the AHA's ambassador for mead.

For Michael's award-winning recipe see page 123.



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Cidermaker of the Year

Award sponsored by Lyons' Brewery of Dublin, Dublin, Calif.



inger Constantine began cidermaking because she was searching for a low-alcohol, dry and pleasantly flavored beverage she could serve to dinner guests. "We do a lot of entertaining and it is hard to find a wine that tastes good and isn't too high in alcohol," explains Ginger. "We made an excellent honey-ginger cider that is a great prelude for Indian food. It is nice to pair cider with foods, but I really make cider for quality-of-life reasons."

Ginger and her husband, Michael, started cidermaking three years ago as an extension of Michael's homebrewing. The awardwinning Bog and Orchard Cranberry Cider was made from a mix of organic apples, some from Jones Port Beales, an island south of their home, and others from a small local orchard. "I like to buy organic to support the Maine Organic Farmers and Growers Association, and to have greater control over my product," says Ginger.

Because of a dry year in 1995 she had trouble obtaining apples. "We are always searching for that specific blend of apples for cidermaking. For sweetness we use Cortland or Spartans, for an acidic balance we use Northern Spy or Jonathan. Macintosh and Golden Delicious are good for aroma, and crab apples provide a nice bite."

Ginger and Michael made six ciders in the fall of 1995: raspberry, honey-ginger, cranberry and three New England-style ciders. "I was ambivalent about the cranberry cider," says Ginger. "I really thought the honey-ginger was our best and would have entered it in the competition, but it really didn't have a category."

Ginger and Michael host a 14-course dinner to celebrate midwinter and they serve cider throughout. The raspberry cider was perfect at that time of year and was served for the party, but it had lost its fruit character in the bottle, according to Ginger.

She tasted the cranberry cider recently to celebrate its win and noted that cranberries can have a "boggy" taste, but the wild cranberries she used do not impart the astringency commercial berries can.

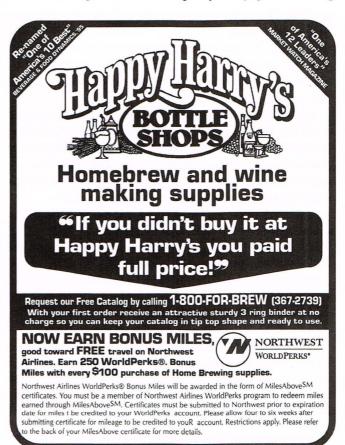
Author Caroline Duncker, AHA project coordinator, has been a homebrewer since 1992.

The award-winning cranberry cider was made from the juice of 1 1/2 bushels of apples for 4 1/2 gallons (17 L). Ginger pitched Red Star Montrachet wine yeast and the cider fermented for three weeks at 55 degrees F (13 degrees C) and for another 18 weeks at 35 degrees F (2 degrees C). After primary fermentation, Ginger boiled 7 1/2 pounds (3.4 kg) cranberries and hand-squeezed the juice through sterilized cheesecloth and added the juice to the carboy. Ginger used the reserved fruit pulp for chutney. "In good New England tradition, nothing goes to waste," boasts Ginger, "and the leftover apples go to feed sheep. All my experience with cooking and gardening has helped my cidermaking, which isn't all that different."

Ginger brings her patience and ability to stay focused to her hobby. She recommends beginning cidermakers be careful with the procedure and allocate enough time to do it right. "You need to have in mind what you are trying to accomplish with your cider, be able to visualize what you want," Ginger says. Michael complements their cidermaking with other skills. "He brings a freshness and enthusiasm because it is a hobby for him, but for me it is a way of life."

Next year Ginger hopes to make a peach and mint cider and possibly a rhubarb cider. "I'd like to get my own cider press to increase production," she says. When asked about entering the nationals next year Ginger sounds enthusiastic. "I like getting feedback from the judges — descriptions that I had imagined for the cider — but Michael has more of a competitive edge, he wants to win."

For Ginger's award-winning recipe see page 124.



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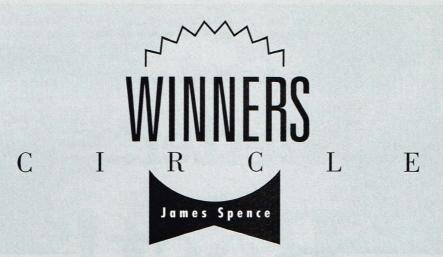
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ere are the 28 best homebrews from the best homebrewers as determined by the AHA 1996 National Homebrew Competition. This year the world's premier homebrew competition accepted 3,331 entries from around the world. With the help of nine judging sites, including an inaugural site in Canada, the first round of judging was completed by April 28 and promoted 555 homebrews to the second round of competition in New Orleans, La. In conjunction with Homebrew Bayou, the AHA 1996 National Homebrewers Conference, June 5 through 8, nearly 100 judges culled the top three beers from each category for gold, silver and bronze medals. Submitted here, for your brewing pleasure, are the gold-medal winning recipes.

John Fahrer of Omaha, Neb., earned the coveted Homebrewer of the Year title with his Muddy Mo Amber Ale English Bitter. Courtesy of Munton & Fison of England and the Great American Beer Festival®, John wins a trip for two to the GABFsm Sept. 26 through 28 in Denver, Colo.

The dynamic duo of Tom Bergman and Chas Peterson of Jefferson, Md., tag-teamed their way to the Ninkasi Award — their two gold medals put them over the top in point standings for the award. Now in its fourth year, the award is sponsored by Pete's Brewing Co. Tom and Chas will work with Pete's to develop a future product. They also earn a week-long brewing course at the Siebel Institute of Technology in Chicago, a \$500 gift certificate to their favorite homebrew store, \$100 of Wicked Ware merchandise and a trip to Pete's brewery offices.

The greatest upset in homebrewing history occurred when the Chicago Beer Society won the Homebrew Club of the Year trophy, narrowly defeating the Sonoma Beerocrats who had held the award for 10 straight years. The award is given to the club that earns the most points in the first and second round of the National Homebrew Competition, as well as the six annual Club-Only Competitions.

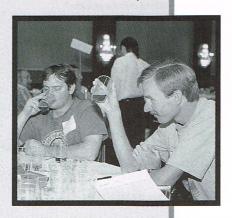
Michael Coen of Kenosha, Wis., was named Meadmaker of the Year for his After Dinner Dessert, while Ginger Constantine of Bar Harbor, Maine, earned the Cidermaker of the Year title for her Bog and Orchard Cranberry Cider.

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More than 90 judges evaluated 555 second-round homebrews at the 1996 National Homebrewers Conference in New Orleans, La.



BARLEY WINE



GOLD MEDAL

AHA 1996 NATIONAL HOMEBREW COMPETITION

Category award sponsored by EDME Ltd., Mistley, Manningtree, England.

MIKE HARPER OAKDALE, CALIFORNIA "BIG OAK BARLEY WINE" BARLEY WINE

Ingredients for 5 U.S. gal (19 L)

- 12 lb Alexander's light malt extract (5.44 kg)
- 5 lb Klages two-row malt (2.27 kg)
- 1 lb 20 °L caramel malt (0.45 kg)
- 7/10 oz Chinook whole hops,
- 12.5% alpha acid (20 g) (60 min.) 9/10 oz Northern Brewer whole hops,
- 8.2% alpha acid (25 g) (60 min.) 1 1/10 oz East Kent Goldings whole hops,
- 5.1% alpha acid (301g) (60 min.) 7/10 oz Chinook whole hops,
- 12.5% alpha acid (20 g) (30 min.) 7/10 oz Northern Brewer whole hops,
- 8.2% alpha acid (20 g) (30 min.) 7/10 oz East Kent Goldings whole hops,
- 5.1% alpha acid (20 g) (30 min.) 7/10 oz Willamette whole hops,
- 7/10 oz Willamette whole hops, 5.4% alpha acid (20 g) (15 min.)
 - 2 oz Cascade whole hops, 5.7% alpha acid (57 g) (dry, eight weeks) Wyeast No. 1056 American ale liquid yeast culture force carbonate in keg
 - Original specific gravity: 1.095
 - · Final specific gravity: 1.024
 - Boiling time: 60 min.
 - Primary fermentation: seven days at 60 to 65 degrees F (16 to 18 degrees C) in glass
 - Secondary fermentation: eight weeks at 60 to 65 degrees F (16 to 18 degrees C) in glass
 - Age when judged (since bottling): four months

Brewer's specifics

Mash grains at 158 degrees F (70 degrees C) (60 min.).

Judges' comments

Not available



BELGIAN AND FRENCH ALE



GOLD MEDAL

AHA 1996 NATIONAL HOMEBREW COMPETITION

Category award sponsored by Manneken-Brussel Imports, S.A. Bieres de Chimay, Austin, Texas.

ROBERT O. HALL JR. ATHENS, GEORGIA TRIPEL

Ingredients for 5 U.S. gal (19 L)

- 13 lb DeWolf-Cosyns Pilsener malt (5.90 kg)
- 1 1/2 lb turbinado sugar (0.68 kg)
- 1 1/5 oz Northern Brewer whole hops, 7.5% alpha acid (34 g) (90 min.)
- 1/2 oz Saaz whole hops, 3% alpha acid (14 g) (15 min.)G.W. Kent Trappist Ale No. A08 liquid yeast culture
- 3/4 cup corn sugar (177 mL) (to prime)
 - Original specific gravity: 1.083
 - Final specific gravity: 1.011
 - Boiling time: 90 min.
 - Primary fermentation: two weeks at 65 degrees F (18 degrees C) in glass
- Secondary fermentation: six weeks at 65 degrees F (18 degrees C) in glass
- Age when judged (since bottling): four months

Brewer's specifics

Mash grains at 67 degrees F (20 degrees C) (90 min.)

Judges' comments

"Nice beer but only lacks a malty background. Maybe use more malt, less attenuation."

"Sweet and spicy with an alcohol kick. Good balance. Good overall strong beer, just more maltiness needed."



LE LAMBIC



GOLD MEDAL

AHA 1996 NATIONAL HOMEBREW COMPETITION

Category award sponsored by L.D. Carlson Co., Kent, Ohio.

RON RAIKE ORLANDO, FLORIDA **BELGIAN-STYLE LAMBIC**

Ingredients for 15 1/2 U.S. gal (58.7 L)

- 9 lb DeWolf-Cosyns two-row pale malt (8.6 kg)
- lb flaked wheat (1.8 kg)
- lb raw wheat (3.52 kg)
- 1 1/2 lb DeWolf-Cosyns CaraVienna malt
 - 4 oz Cascade whole hops, two years old (113 g) (150 min.)
- 6 4/5 oz Headstart Brettanomyces bruxellensis starter (200 mL)
- 6 4/5 oz Headstart Brettanomyces lambicus starter (200 mL)
- 6 4/5 oz Headstart Kloeckera apiculata starter (200 mL)
- 6 4/5 oz Headstart Candida lambicus starter (200 mL)
- 6 4/5 oz Boon Gueuze dregs (three-yearold bottle) starter (200 mL)
- 6 4/5 oz starter made from dregs of previous lambic-style batch (200 mL)
- oz Wyeast No. 1056 American ale 6 4/5 liquid yeast starter (200 mL) (pitched after two weeks)
- 6 4/5 oz Headstart Pediococcus damnosus starter (200 mL) (pitched after three months)
- cup corn sugar (118 mL) (to prime 2 1/2 gal or 9.5 L)
 - Original specific gravity: 1.058
 - Final specific gravity: unknown
 - Boiling time: 150 min.
 - Primary fermentation: 12 months at 68 to 78 degrees F (20 to 26 degrees C) in stainless steel
 - Age when judged (since bottling): three months

Brewer's specifics

Dough-in with 155-degree-F (68-degree-C) water, rest at 113 degrees F (45 degrees C). Use a fourhour turbidish triple decoction mash schedule: first decoction is thick but milky, second is similar, third is 98 percent liquid. Each decoction is 4 to 5 quarts (3.8 to 4.7 L). Rest for 30 minutes between each decoction at 140 degrees F (60 degrees C) and 158 degrees F (70 degrees C). Heat sparge water to between 176 and 194 degrees F (80 and 90 degrees C). Lauter for 2 1/2 hours. First runnings are 1.051. Collect 17 gallons (64.3 L). Boil for 2 1/2 hours. Chill 13 gallons (49.2 L) and pitch yeast and bacteria according to above schedule.

Judges' comments

"Somewhat sweet. Oily mouthfeel, very good. Lactic soumess could be more intense. Brettanomyces taste faint. In style, very good beer. Mouthfeel dead on, but residual sweetness is perhaps cloying."

"Flavor is a sweet/tart combination. The lambic is low on conditioning. Balance is good but could be improved. It could use a more complex lactic character. Brettanomyces character could be more complex in flavor."



GOLD MEDAL

AHA 1996 NATIONAL HOMEBREW COMPETITION

Category award sponsored by Premier Malt Products, Grosse Pointe, Michigan.

MICHAEL S. SACKETT WICHITA, KANSAS "BACK TO BACK DOUBLE BROWN ALE" **ENGLISH BROWN**

Ingredients for 5 U.S. gal (19 L)

- 5 lb Klages malt (2.27 kg)
- lb Munich malt (1.36 kg)
- lb Vienna malt (0.91 kg) 2
- lb 60 °L crystal malt (0.45 kg)
- 3/4 lb 20 °L crystal malt (0.34 kg)
- lb roasted malt (0.11 kg)
- lb chocolate malt (0.11 kg)
- oz Fuggles hop pellets, 4.4% alpha acid (28 g) (75 min.)
- oz Willamette hop pellets, 3.7% alpha acid (28 g) (75 min.)
- 1/2 oz Cascade hop pellets, 4.2% alpha acid (14 g) (15 min.)
 - 1 oz Cascade hop pellets, 4.2% alpha acid (28 g) (three min.) Wyeast No. 1056 American ale liquid yeast culture
- cup corn sugar (118 mL) (to prime)
- Original specific gravity: 1.068
- Final specific gravity: 1.012
- Boiling time: 75 min.
- Primary fermentation: two weeks at 70 degrees F (21 degrees C) in plastic
- Age when judged (since bottling): four months

Brewer's specifics

Mash grains at 148 degrees F (64 degrees C) (90 min.).

Judges' comments

"Nice caramel sweetness in beginning. Astringency from roasted grains is a bit much. Aroma could be better. Oxidized aroma a problem."

"On the low end of the color scale. Only appears to be about 14 SRM. Very full-flavored beer but overly roasty. Big in the mouth. Try cutting back on the roasted grains."







ENGLISH-STYLE PALE ALE



GOLD MEDAL

AHA 1996 NATIONAL HOMEBREW COMPETITION

Category award sponsored by Wynkoop Brewing Co., Denver, Colorado.

CHRIS NEIKIRK NORFOLK, VIRGINIA "SLACKER I.P.A." INDIA PALE ALE

Ingredients for 10 U.S. gal (38 L)

- 18 lb British malt (8.16 kg)
- 4 lb U.S. two-row pale malt (1.81 kg)
- 1 lb dextrin malt (0.45 kg)
- 1 lb Munich malt (0.45 kg)
- 1 lb 60 °L crystal malt (0.45 kg)
- 3 oz Nugget hop pellets, 11% alpha acid (85 g) (60 min.)
- 6 oz Cascade hop pellets, 4.4% alpha acid (170 g) (30 min.)
- 2 oz Kent Goldings hops, 4.2% alpha acid (57 g) (dry, one week) Wyeast No. 1028 London ale liquid yeast culture
- 1 cup corn sugar (237 mL) (to prime)
- Original specific gravity: 1.062
- Final specific gravity: 1.014
- · Boiling time: 85 min.
- Primary fermentation: six days at 63 degrees F (17 degrees C) in plastic
- Secondary fermentation: 10 days at 63 degrees F (17 degrees C) in glass
- Age when judged (since bottling):
 3 1/2 months

Brewer's specifics

Mash grains at 130 degrees F (54 degrees C) (30 min.) 153 degrees F (67 degrees C) (75 min.).

Judges' comments

"Long on bitterness. Long on hop flavor. Malt is well-balanced. Clean beer. Very tasty."

"Malty but slight hop aftertaste fades fast. Slight diacetyl. Some apple. Add more hops late in boil."

AMERICAN-



GOLD MEDAL

AHA 1996 NATIONAL HOMEBREW COMPETITION

Category award sponsored by Northwestern Extract Co., Brookfield, Wisconsin.

JOHN C. ALLEN ALPHARETTA, GEORGIA "IBU WHO?" AMERICAN PALE ALE

Ingredients for 5 U.S. gal (10 L)

- 9 lb Superbrau pale malt extract (4.08 kg)
- 1 lb Hugh Baird 13 to 17 °L crystal malt (0.45 kg)
- 1/2 lb DeWolf-Cosyns biscuit malt (0.23 kg)
- 1/2 lb DeWolf-Cosyns aromatic malt (0.23 kg)
- 1/4 lb DeWolf-Cosyns CaraVienna malt (113 g)
- 2 oz Columbus whole hops, 15% alpha acid (57 g) (60 min.)
- oz Perle whole hops, 8.4% alpha acid (28 g) (60 min.)
- 1 oz Columbus whole hops, 15% alpha acid (28 g) (10 min.)
- oz Columbus whole hops, 15% alpha acid (28 g) (five min.)
- 2 oz Cascade whole hops, 5.8% alpha acid (57 g) (dry, four days) Wyeast No. 1056 American ale liquid yeast culture
- 3/4 cup corn sugar (177 mL) (to prime)
 - Original specific gravity: 1.066
- Final specific gravity: 1.020
- · Boiling time: 60 min.
- Primary fermentation: seven days at 68 degrees F (20 degrees C) in glass
- Secondary fermentation: four days at 38 degrees F (23 degrees C) in glass
- Age when judged (since bottling):
 3 1/2 months

Brewer's specifics

Steep grains at 155 degrees F (68 degrees C) (30 min.).

Judges' comments

"Slight malt sweetness with a bitter finish — good. Hop flavor is apparent. Some fruitiness which is OK. The bitterness is at the high end."

"Hop bitterness is robust and very appropriate for style requirements. Some additional maltiness would improve flavor. Also, additional fruityestery content would help."

"Puckering bitterness overwhelms. Grapefruit and lime. Slight diacetyl. May have oversparged. Reduce hops a little, increase maltiness."

ENGLISH BITTER



GOLD MEDAL

1996 Homebrewer of the Year

AHA 1996 NATIONAL HOMEBREW COMPETITION

Category award sponsored by Alternative Beverage, Charlotte, North Carolina.

JOHN R. FAHRER OMAHA, NEBRASKA "MUDDY MO AMBER ALE" ENGLISH BEST (SPECIAL) BITTER

Ingredients for 5 U.S. gal (19 L)

- 8 1/2 lb Schrier two-row malt (3.8 kg)
 - 10 oz 120 °L crystal malt (283 g)
 - 1 oz chocolate malt (28 g)
 - 1/2 oz Nugget whole hops, 12% alpha acid (14 g) (60 min.)
 - 1/2 oz Fuggles hop plugs, 4.2% alpha acid (14 g) (30 min.)
- 1/2 oz Fuggles hop plugs, 4.2% alpha acid (14 g) (10 min.)
- oz Tettnanger hop pellets,
 4.7% alpha acid (28 g) (finish)
 Wyeast No. 1028 London ale liquid
 veast culture
- 66 oz wort (21.95L (to prime)
- Original specific gravity: 1.050
- Final specific gravity: 1.012
- Boiling time: 75 min.
- Primary fermentation: seven days at 68 degrees F (20 degrees C) in stainless steel
- Secondary fermentation: 16 days at 66 degrees F (19 degrees C) in stainless steel
- Age when judged (since bottling): seven months

Brewer's specifics

Mash grains at 122 degrees F (50 degrees C) (25 min.), 152 degrees F (67 degrees C) (60 min.), 157 degrees F (69 degrees C) (20 min.) 169 degrees F (76 degrees C) (10 min.).

Judges' comments

"Very nice flavor. Slight astringency and phenolics detract a little from this beer's flavor. This is a very good special bitter. Possibly the sparge water pH could be adjusted to avoid the slight astringency."

"Some slight astringency on finish. Balance great."

"Phenol up front disappears very quickly. Malt sweetness is present. Very pleasant to drink."

SCOTTISH ALE



GOLD MEDAL



AHA 1996 NATIONAL HOMEBREW COMPETITION

Category award sponsored by Beercrafers Inc., Turnersville, New Jersey.

WENDY PARKER-WOOD AND BEV NULMAN ALBUQUERQUE, NEW MEXICO "PAY THE PIPER II" SCOTTISH LIGHT ALE

Ingredients for 7 3/4 U.S. gal (29.3 L)

- 5 5/8 lb Hugh Baird two-row malt (2.55 kg)
 - 5 lb 6 °L German Munich malt (2.27 kg)
 - 10 oz peated malt (2.83 g)
 - 10 oz 32 °L Carastan malt (2.83 g)
 - 4 oz 2 °L wheat malt (113 g)
 - 2 oz 50 °L roasted malt (57 g)
 - oz East Kent Goldings hop plugs, 5.2% alpha acid (28 g) (60 min.)
- 1/10 oz East Kent Goldings hop pellets, 5.2% alpha acid (28 g) (60 min.)
 - oz East Kent Goldings hop plugs,
 5.7% alpha acid (28 g) (five min.)
 Wyeast No. 1728 Scottish ale liquid yeast culture
- 7/8 cup corn sugar (207 mL) (to prime)
 - Original specific gravity: 1.048
 - · Final specific gravity: 1.013
 - · Boiling time: 60 min.
 - Primary fermentation: six days at 65 degrees F (18 degrees C) in glass
 - Secondary fermentation: five days at 58 degrees F (15 degrees C) in glass
 - Age when judged (since bottling):
 15 months

Brewers' specifics

Mash grains at 132 degrees F (56 degrees C) (30 min.), 154 to 156 degrees F (68 to 69 degrees C) (60 min.), 168 degrees F (76 degrees C) (10 min.).

Judges' comments

"A little astringent. Good caramel flavor. Hop bitterness a bit too high for the style. A very drinkable beer."

"Smokiness more evident in the flavor than aroma, perhaps a bit too strong. Good level of dark malt flavor. Very nice. This is exceptionally malty for a 1.035 beer. Very drinkable."



PORTER



GOLD MEDAL

AHA 1996 NATIONAL HOMEBREW COMPETITION

Category award sponsored by The Cellar Homebrew, Seattle, Washington.

ROSS FREDERIKSEN LOOMIS, CALIFORNIA "SMASHING PORTER" PORTER

Ingredients for 5 U.S. gal (19 L)

- 8 lb English pale ale malt (3.63 kg)
- 5 lb English brown malt (2.27 kg)
- l b chocolate malt (0.45 kg)
- 2 oz Fuggles hop pellets, 3.4% alpha acid (57 g)(60 min.)
- oz Fuggles hop pellets, 3.4% alpha acid (28 g) (45 min.)
- 1/2 oz Fuggles hop pellets, 3.4% alpha acid (14 g) (30 min.)
- 1/2 oz Fuggles hop pellets, 3.4% alpha acid (14 g) (15 min.) Wyeast No. 1028 London Burton ale liquid yeast culture
- 4 oz corn sugar (113 g) (to prime)
- Original specific gravity: 1.056
- Final specific gravity: 1.014
- Boiling time: 90 min.
- Primary fermentation: five days at 75 degrees F (24 degrees C) in glass
- Secondary fermentation: 10 days at 75 degrees F (24 degrees C) in glass
- Age when judged (since bottling): five months

Brewer's specifics

Mash grains at 154 degrees F (68 degrees C) (60 min.).

Judges' comments

"Pleasant roasted malt flavor and freshness without the astringency in finish. Nice bitterness with good smooth finish. No sharp edges and perfect fullness."

"Malt and hops well-balanced. Aftertaste still has roastiness. Hops are in background as they should be for this category. Aroma is very inviting. Great job."

"Overpowering on roasted barley. Very drinkable beer."



ENGLISH AND SCOTTISH STRONG ALE



GOLD MEDAL

AHA 1996 NATIONAL HOMEBREW COMPETITION

Category award sponsored by Wine & Hop Shop, Denver, Colorado.

LOREN CLAYPOOL AND JEFF BOGGESS SCOTT DEPOT, WEST VIRGINIA "HILTER KILTER WEE HEAVY SCOTCH ALE" STRONG SCOTCH ALE

Ingredients for 5 U.S. gal (19 L)

- 6 lb pale ale malt (2.72 kg)
- 6 2/3 lb Glenbrew light malt extract (3.02 kg)
 - 1/2 lb Laaglander dry malt extract (0.23 kg)
 - 2 lb Klages malt (0.91 kg)
 - 2 lb CaraPils malt (0.91 kg)
 - 2 oz roasted barley (57 g)
- 2 1/2 oz East Kent Goldings hop pellets, 4.6% alpha acid (71 g) (60 min.)
 - tsp Irish moss (4.9mL) (15 min.)
 Wyeast No. 1728 Scottish ale liquid
 yeast culture
 - 2/3 cup corn sugar (158 mL) (to prime)
 - · Original specific gravity: 1.094
 - Final specific gravity: 1.019
 - Boiling time: 90 min.
 - Primary fermentation: 22 days at 65 degrees F (18 degrees C) in glass
 - Age when judged (since bottling): 18 months

Brewers' specifics

Mash grains in three gallons (11.36 L) filtered tap water at 153 degrees F (67 degrees C) (90 min.). Sparge with five gallons (19 L) 165-degree-F (74-degree-C) filtered tap water.

Judges' comments

"Big malt taste up front with strong alcohol at end. Good hop finish."

"Intense malt flavor balanced with high alcohol."

"Very nice beer. Everything blends together well."

"Pronounced hop bitterness. Licoricelike flavor predominates."



STOUT



GOLD MEDAL

AHA 1996 NATIONAL HOMEBREW COMPETITION

Category award sponsored by Alternative Garden Supply D/B/A Brew & Grow, Streamwood, Illinois.

DAN MORLEY CALGARY, ALBERTA "XXXMAS STOUT" FOREIGN-STYLE STOUT

Ingredients for 6 U.S. gallons (23 L)

- 10 lb two-row Gambrinus malt (0.45 kg)
- 1 1/2 lb roasted barley (0.68 kg)
- 1 1/2 lb flaked barley (0.68 kg)
 - 1 lb wheat malt (0.45 kg)
 - l lb instant oatmeal (0.45 kg)
 - 1/2 lb Munich malt (0.23 kg)
 - 1/2 lb chocolate malt (0.23 kg)
 - 1/2 lb 120° L crystal malt (0.23 kg)
 - 2 oz Northern Brewer hop pellets, 7.9% alpha acid (57 g) (75 min.)
 - oz Styrian Goldings hop pellets, 4.2% alpha acid (28 g) (35 min.)
 - 1 tsp. Irish moss (4.9 mL) (20 min.)
 - oz Styrian Goldings hop pellets,
 4.2% alpha acid (28 g) (15 min.)
 Wyeast No. 1084 Irish Ale liquid yeast culture
 - 1 cup corn sugar (236 ml) (to prime)
 - · Original specific gravity: 1.069
 - Final specific gravity: 1.020
 - · Boiling time: 75 min.
 - Primary fermentation: Five days at 68 degrees F (20 degrees C) in glass
 - Secondary fermentation: 18 days at 62 degrees F (17 degrees C) in glass
 - Age when judged (since bottling): five months

Brewer's specifics

Mash grains at 122 degrees F (50 degrees C) (30 min.) Raise to 140 degrees F (60 degrees C) with boiling water, then raise to 152 degrees F (67 degrees C) for two hours. Sparge with 170-degree-F (77-degree-C) water.

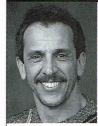
Judges' comments

Roasty malt flavor. Balance of malt and bitterness good. A good, clean, well-balanced beer.

Coffee, caramel bitterness evident. I like this beer.



BOCK



GOLD MEDAL

AHA 1996 NATIONAL HOMEBREW COMPETITION

Category award sponsored by Washington Hop Commission, Yakima, Washington.

PHIL BERNIE STATEN ISLAND, NEW YORK "HANDS OFFA MAIBOCK" GERMAN-STYLE HELLES BOCK

Ingredients for 6 1/2 U.S. gal (24.6 L)

- 12 lb Briess pale malt (5.44 kg)
- 3 lb Briess Munich malt (1.36 kg)
- 1 1/2 lb Briess crystal malt (0.68 kg)
 - oz Northern Brewer hop pellets, 8.9% alpha acid (28. g) (60 min.)
 - oz Kent Goldings hop pellets, 4% alpha acid (28 g) (60 min.)
- 3/4 oz Mt. Hood hop pellets, 4.5% alpha acid (21 g) (10 min.)
 Wyeast No. 2308 Munich lager liquid yeast culture force carbonate in keg
 - Original specific gravity: 1.070
 - Final specific gravity: 1.018
 - · Boiling time: 90 min.
- Primary fermentation: two weeks at 50 degrees F (10 degrees C) in glass
- Secondary fermentation: six weeks at 40 degrees F (4 degrees C) in glass
- Age when judged (since bottling): seven months

Brewer's specifics

Use a step infusion mash schedule as follows: 120 degrees F (49 degrees C) (30 min.), 150 degrees F (66 degrees C) (60 min.) and 168 degrees F (76 degrees C) (five min.).

Judges' comments

"Slightly fruity, which is inappropriate. Seems too bitter for the style. The balance needs to be malty."

"Malt dominates the flavor. Hop bitterness low to medium. Very good beer. Malt flavor comes through as it should. Astringency should be corrected."

"Sweet, appropriately low hop level. The sweetness could be more malt-accented. A very good beer. The only element I'm missing is a firm, big clean malt character."



GERMAN DARK LAGER



GOLD MEDAL

1996 Ninkasi Award Winners



AHA 1996 NATIONAL HOMEBREW COMPETITION

Category award sponsored by Crosby & Baker, Westport, Massachusetts.

TOM BERGMAN AND CHAS PETERSON JEFFERSON, MARYLAND "BEAVER CREEK™ DOUBLE RAVEN LAGER" SCHWARZBIER

Ingredients for 6.5 U.S. gal (24.6 L)

- 6 lb Munich malt (2.72 kg)
- 5 1/2 lb Klages malt (2.49 kg)
 - 1 lb biscuit malt (0.45 kg)
 - 1 lb crystal malt (0.45 kg)
 - 1/2 lb CaraPils malt (227 g)
 - 1/2 lb aromatic malt (227 g)
 - 1/4 lb Belgian Special "B" malt (113 g)
 - 1/2 lb chocolate malt (227 g)
 - 1/2 lb CaraMunich malt (227 g)
 - oz Northern Brewer hop pellets, 8.9% alpha acid (28 g) (60 min.)
 - 3/4 oz Hallertauer whole hops, 2.6% alpha acid (21 g) (20 min.)
 - 1/2 oz Mittelfrüh hop pellets, 2.6% alpha acid (14 g) (five min.) Wyeast No. 2206 Bavarian lager liquid yeast culture
- 3/4 cup corn sugar (177 mL) (to prime)
 - Original specific gravity: 1.068
 - Final specific gravity: 1.022
 - Boiling time: 120 min.
 - Primary fermentation: 12 days at 44 degrees F (27 degrees C) in glass
 - Secondary fermentation: 24 days at 44 degrees F (27 degrees C) in glass
- Age when judged (since bottling):
 5 1/2 months

Brewers' specifics

Double decoction mash schedule: main mash temperature rests at 122 degrees F (50 degrees C) (30 min.), 160 degrees F (71 degrees C) (30 min.) and 170 degrees F (77 degrees C) (30 min.).

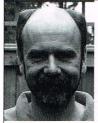
Judges' comments

"Medium malt sweetness, low bitterness. Good beer. Could use a bit more roast malt and a bit more hop bitterness."

"Nice malty-roasted malt flavor. Could be a bit more hop bitterness. A very nice beer."

"Malt flavor is there. Hop bitterness is somewhat lacking. Needs more Noble-type hops, maybe. Very good effort."

GERMAN LIGHT LAGER



GOLD MEDAL

AHA 1996 NATIONAL HOMEBREW COMPETITION

Category award sponsored by Briess Malting Co., Chilton, Wisconsin.

TED JOHNSTON PHOENIXVILLE, PENNSYLVANIA "EMILY'S EXPORT" DORTMUNDER/EUROPEAN-STYLE EXPORT

Ingredients for 5 U.S. gal (19 L)

- 6 lb Durst Pilsener malt (2.72 kg)
- 1 lb HDM CaraPils malt (0.45 kg)
- 1/2 lb Durst Munich malt (227 g)
- 1 lb Briess six-row pale malt (0.45 kg)
- 1 1/2 oz Hersbrucker Hallertauer whole hops, 3.5% alpha acid (43 g) (60 min.)
- 1/2 oz Hersbrucker Hallertauer whole hops, 3.5% alpha acid (14 g) (30 min.)
- 1/2 oz Hersbrucker Hallertauer whole hops, 3.5% alpha acid (14 g) (10 min.)
 Wyeast No. 2206 Bavarian lager liquid yeast culture
- 3/4 cup corn sugar (177 mL) (to prime)
 - · Original specific gravity: 1.051
- Final specific gravity: 1.020
- · Boiling time: 90 min.
- Primary fermentation: four days at 65 degrees F (18 degrees C) and 11 days at 48 degrees F (9 degrees C) in glass
- Secondary fermentation: 30 days at 48 degrees F (9 degrees C) in glass
- Tertiary fermentation: 16 days at 35 to 40 degrees F (2 to 4 degrees C) in glass
- Age when judged (since bottling): six months

Brewer's specifics

Mash grains at 132 degrees F (56 degrees C) (30 min.), 154 degrees F (68 degrees C) (90 min.), 168 degrees F (76 degrees C) (five min). Raise temperature by decocting one-third of the mash to boiling and returning it to the main mash.

Judges' comments

"Slight malt flavor with pleasant hop finish. Some sour-metallic finish detracts from flavor. Could use a little more malt."

"Nice malty sweetness — tastes like a decoction mash. Body a bit thin."

CLASSIC PILSENER



GOLD MEDAL

AHA 1996 NATIONAL HOMEBREW COMPETITION

Category award sponsored by California Concentrates, Acampo, California.

FRESNO, CALIFORNIA GERMAN PILSENER

Ingredients for 12 U.S. gal (45.4 L)

- 20 lb Durst Pilsener malt (9.07 kg)
- 3 oz Saaz whole hop pellets, 3.2% alpha acid (85 g) (90 min.)
- 2 oz Saaz whole hop pellets, 3.2% alpha acid (57 g) (30 min.)
- oz Saaz whole hops, 5.5% alpha acid (57 g) (finish)
 Wyeast No. 2042 Danish lager liquid yeast culture force carbonate in keg
- · Original specific gravity: 1.050
- Final specific gravity: 1.010
- · Boiling time: 90 min.
- Primary fermentation: four weeks at 47 degrees F (28 degrees C) in stainless steel
- Secondary fermentation: four weeks at 32 degrees F (20 degrees C) in stainless steel
- Age when judged (since bottling): three months

Brewer's specifics

Mash grains at 150 degrees F (66 degrees C) (60 min.).

Judges' comments

"Good malt up front. Medium to low hop flavor. Conditioning on low side. Good balance of malt and bitterness. Lacks some freshness and hop flavor."

"Good malt. Finishing with good bitterness. True to style. Very good beer."

AMERICAN LAGER



GOLD MEDAL

AHA 1996 NATIONAL HOMEBREW COMPETITION

Category award sponsored by Pabst Brewing Co., Milwaukee, Wisconsin.

DAVID STONE FARMINGTON HILLS, MICHIGAN "EXPORT — NOT!" PREMIUM LAGER

Ingredients for 5 U.S. gal (19 L)

- 5 lb American two-row malt (2.27 kg)
- 3 lb dry light malt extract (1.36 kg)
- 1/2 lb German light crystal malt (227 g)
- 1/2 lb Munich malt (227 g)
- 1/2 lb CaraPils malt (227 g)
- 1/2 oz Perle whole hops, 7.4% alpha acid (14 g) (60 min.)
- oz Tettnanger whole hops, 5.2% alpha acid (28 g) (30 min.)
- 1/2 oz Tettnanger whole hops, 5.2% alpha acid (14 g) (15 min.)
- 1/2 oz Tettnanger whole hops, 5.2% alpha acid (14 g) (three min.) Wyeast No. 2007 Pilsener lager liquid yeast culture
- 3/4 cup corn sugar (177 mL) (to prime)
 - Original specific gravity: 1.042
- Final specific gravity: 1.013
- · Boiling time: 60 min.
- Primary fermentation: 14 days at 60 degrees F (16 degrees C) in glass
- Secondary fermentation: 34 days at 35 degrees F (2 degrees C) in glass
- Age when judged (since bottling): three months

Brewer's specifics

Mash grains at 155 degrees F (68 degrees C) (60 min.).

Judges' comments

"Well-made beer. Very clean. Well-balanced."
"Very clean and well-balanced. Good hop in aftertaste. Dark for category."

"Full lager flavor. Slight hop flavor OK. Good golden color. "



VIENNA/MÄRZEN/ OKTOBERFEST



GOLD MEDAL

AHA 1996 NATIONAL HOMEBREW COMPETITION

Category award sponsored by F.H. Steinbart, Portland, Oregon.

GEORGE DE PIRO NYACK, NEW YORK "MILO-MÄRZEN NO. 2" MÄRZEN/OKTOBERFEST

Ingredients for 5 1/4 U.S. gal (19.9 L)

- 5 1/2 lb Ireks Pilsener malt (2.49 kg)
- 4 1/2 lb Ireks Munich malt (2.04 kg)
- 1 lb CaraPils malt (0.45 kg)
- 3/4 lb 20 °L crystal malt (3.34 kg)
- 2/5 oz Perle hop pellets, 7.3% alpha acid (11.65 g) (39 min.)
- 3/5 oz Mittelfrüh hop pellets, 3.6% alpha acid (17 g) (13 min.)
 Wyeast No. 2206 Bavarian lager liquid yeast culture force carbonate in keg
 - · Original specific gravity: 1.062
 - · Final specific gravity: 1.021
 - · Boiling time: 140 min.
 - Primary fermentation: 19 days at 46 to 50 degrees F (8 to 10 degrees C) in glass
 - Secondary fermentation: 45 days at 45 degrees F (27 degrees C) in glass
 - Tertiary fermentation: 60 days at 32 degrees F (0 degrees C) in stainless steel
- Age when judged (since bottling): two months

Brewer's specifics

Double decoction mash: mash in at 95 degrees F (35 degrees C), pull first decoction, rest at 154 degrees F (68 degrees C) for 25 minutes, then boil 30 minutes, return to main mash raising temperature to 122 degrees F (50 degrees C) hold for 20 minutes then heat mash to 151 degrees F (66 degrees C) and hold for 40 minutes. Pull second decoction and boil 30 minutes. Return to main mash raising temperature to 159 degrees F (71 degrees C) and hold until conversion. Raise temperature to 168 degrees F (76 degrees C) for mash-out. Sparge with six gallons (22.7 L) of 168-degree-F (76 -degree-C) water adjusted to pH 5.8 with citric acid.

Judges' comments

"Sweet flavor, faint toasty tones. A bit too sweet. Needs more toast and less sweetness. Use light or no crystal malts and Munich malt to achieve this. A very nice beer. Tweak the malt profile to add toasty character. Increase hop bitterness slightly."

"Balance appropriate, some alcohol. Smooth, malty, just about dead on for style."

"Sweet maltiness, low hop, nice balance. A very well-made interesting beer; sweet maltiness dominates."

GERMAN-STYLE ALE



GOLD MEDAL

AHA 1996 NATIONAL HOMEBREW COMPETITION

Category award sponsored by Crescent City Brewhouse, New Orleans, Louisiana.

GIL HANTZSCH, JOHN BOWMAN, SCOTT SPEVACEK, DAVE ANDERSON BARABOO, WISCONSIN "KOWABUNGTIE" DÜSSELDORF-STYLE ALTBIER

Ingredients for 10 U.S. gal (37.8 L)

- 3 lb Vienna malt (1.36 kg)
- 4 lb Munich malt (1.81 kg)
- 1 lb toasted Victory malt (0.45 kg)
- 2 lb dextrin malt (0.91 kg)
- 6 lb Northwestern light malt extract syrup (2.72 kg)
- 2 lb light dry extract (0.91 kg)
- 6 oz chocolate malt (170 kg)
- 2 oz Tettnanger hop pellets, 4.3% alpha acid (57 g) (60 min.)
- 1 1/2 oz Saaz hop pellets, 5.4% alpha acid (43 g) (60 min.)
 - oz Tettnanger hop pellets,4.3% alpha acid (57 g) (30 min.)
- 1 1/2 oz Saaz hop pellets, 5.4% alpha acid (43 g) (30 min.)
 - oz Hallertauer hop pellets,
 3.8% alpha acid (57 g) (finish)
 Wyeast No. 1007 German ale liquid yeast culture
- 1 1/2 cup corn sugar (355 mL) (to prime)
 - · Original specific gravity: 1.050
 - Final specific gravity: 1.012
 - · Boiling time: 60 min.
 - Primary fermentation: four 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): four months

Brewers' specifics

Mash grains at 120 degrees F (49 degrees C) (30 min.),158 degrees F (70 degrees C) (30 min.).

Judges' comments

"Well-balanced. Malt expression is balanced with clean hops. Bitterness lingers a bit. Smooth and well-crafted."

"Roasty malt flavor is too predominant. Too sweet for the style. Closer to an American brown ale. An OK beer, but lacks the crispness and cleanness that are hallmarks of this style."

"Nice balance, bitterness on the high side, which is OK. Fine brew!"

GERMAN STYLE WHEAT BEER



GOLD MEDAL

AHA 1996 NATIONAL HOMEBREW COMPETITION

Category award sponsored by Tabernash Brewing Co., Denver, Colorado.

DENNIS DAVISON GREENFIELD, WISCONSIN BERLINER WEISSE

Ingredients for 5 U.S. gal (19 L)

- 3 1/2 lb DeWolf-Cosyns wheat malt (1.59 kg)
- 3 1/2 lb DeWolf-Cosyns Pilsener malt (1.59 kg)
 - 1/4 oz Tettnanger hop pellets,
 4.7% alpha acid (7 g) (60 min.)
 Yeast Lab Irish ale yeast culture
 Lactobacillus culture
 force carbonate in keg
 - Original specific gravity: 1.034
 - · Final specific gravity: unknown
 - · Boiling time: 120 min.
 - Primary fermentation: two weeks at 65 degrees F (18 degrees C) in glass
 - Secondary fermentation: two years at 65 degrees F (18 degrees C) in glass
 - Age when judged (since bottling): five months

Brewer's specifics

Mash grains at 150 degrees F (66 degrees C) (90 min.).

Judges' comments

"Golden color at dark end of allowed range. Only slight haze, big head. Aggressively sour, very light body."

"Crisp, clean lactic sourness. Sourness lasts for most of aftertaste. Fruity esters very subtle — could stand some increase."

"Very intense lactic sourness. Extremely tart and refreshing. This is just a wonderful beer and great example of a most difficult style."



SMOKED BEER



GOLD MEDAL

AHA 1996 NATIONAL HOMEBREW COMPETITION

Category award sponsored by Jim's Homebrew Supply, Spokane, Washington.

CHRIS KAUFMAN DERBY, KANSAS "GESCHMACK RAUCHBIER" BAMBERG-STYLE RAUCHBIER

Ingredients for 5 1/2 U.S. gal (21 L)

- 5 1/2 lb DeWolf-Cosyns Pilsener malt (2.49 kg)
- 1 1/2 lb DeWolf-Cosyns Munich malt (0.68 kg)
 - 3 lb Hugh Baird home-smoked tworow malt (hickory chips) (1.36 kg)
- 1/2 lb dextrin malt (0.23 kg)
- 1 1/4 oz Spalt whole hops, 4.8% alpha acid (35 g) (60 min.)
- oz Spalt whole hops, 4.8% alpha acid (21 g) (25 min.)
 Wyeast No. 2206 Bavarian lager liquid yeast culture
- 1 1/4 cup light dry malt extract (296 mL) (to prime)
 - Original specific gravity: 1.056
 - Final specific gravity: 1.019
 - Boiling time: 75 min.
 - Primary fermentation: four days at 55 degrees F (13 degrees C) in glass
 - Secondary fermentation: 20 days at 40 degrees F (4 degrees C) in glass
 - Tertiary fermentation: 40 days at 40 degrees F (4 degrees C) in stainless steel
 - Age when judged (since bottling):
 2 1/2 months

Brewer's specifics

Mash grains at 122 degrees F (50 degrees C) (30 min.), 145 degrees F (63 degrees C) (30 min.), 150 degrees F (66 degrees C) (30 min.), 165 degrees F (74 degrees C) (15 min.).

Judges' comments

"Low smoke flavor. Low malt sweetness. Smoke flavor does not match aroma. Needs more smoke flavor and body."

"Very smooth. Nice balance. Good smoke flavor. Good malt flavor. Just a little too sweet for style."

FRUIT AND VEGETABLE BEER



GOLD MEDAL

1996 Ninkasi Award Winners



AHA 1996 NATIONAL HOMEBREW COMPETITION

Category award sponsored by The Purple Foot, Milwaukee, Wisconsin.

TOM BERGMAN AND CHAS PETERSON JEFFERSON, MARYLAND "BEAVER CREEK™ STRAWBERRY ALE" STRAWBERRY ALE

Ingredients for 6 U.S. gal (22.7 L)

- 1 1/2 lb clover honey (0.68 kg)
 - 1 lb light dry malt extract (0.45 kg)
- 1 1/2 lb Pilsener malt (0.68 kg)
 - 1 lb Klages malt (0.45 kg)
- 2 1/2 lb pale malt (1.13 kg)
 - 1/2 lb biscuit malt (0.23 kg)
 - 1/2 lb CaraPils malt (0.23 kg)
 - 1 lb flaked corn (0.45 kg)
 - oz Willamette whole hops,
 4.9% alpha acid (28 g) (60 min.)
 Wyeast No. 1056 American ale
 liquid yeast culture
 - 10 lb puréed frozen strawberries (4.54 kg) (in secondary)
- 1 1/2 oz strawberry extract (4.4 g) (at bottling)
 - 3/4 cup corn sugar (177 mL) (to prime)
 - · Original specific gravity: 1.049
 - Final specific gravity: 0.999
 - Boiling time: 60 min.
 - Primary fermentation: seven days at 63 degrees F (17 degrees C) in glass
 - Secondary fermentation: 14 days at 65 degrees F (28 degrees C) in plastic
 - Tertiary fermentation: 35 days at 65 degrees F (18 degrees C) in glass
 - Age when judged (since bottling):
 12 months

Brewers' specifics

Mash grains at 126 degrees F (52 degrees C) (30 min.), to 153 degrees F (67 degrees C) (40 min.), 156 degrees F (69 degrees C) (50 min.).

Judges' comments

"Tartness from fruit as expected. Flavor very low — strawberries difficult to work with. Astringent finish. Somewhat one dimensional in flavor, dry and sour-tart. Needs some balancing sweetness and fruit flavor."

"Very astringent and somewhat sour taste. May have a sanitation problem."

"Lighter strawberry flavor than aroma, but very pleasant flavor. Good conditioning — no whopper flaws. Nice summer beer. Fine job."

HERB AND SPICE BEER



GOLD MEDAL

AHA 1996 NATIONAL HOMEBREW COMPETITION

Category award sponsored by Marin Brewing Co., Larkspur, California.

SCOTT MILLS LOVELAND, COLORADO "FLOWER POWER" HERB AND SPICE BEER

Ingredients for 5 U.S. gal (19 L)

- 3 lb honey (1.36 kg)
- 3 2/3 lb Ireks wheat extract (1.63 kg)
 - fl. oz rose water (296 mL)
 (in secondary)
 Wyeast No. 3056 Bavarian Weissen
 liquid yeast culture
 - 1 cup corn sugar (237 mL) (to prime)
 - Original specific gravity: 1.048
 - Final specific gravity: 1.012
 - · Boiling time: 10 min.
 - Primary fermentation: 15 days at 65 degrees F (18 degrees C) in glass
 - Secondary fermentation: 30 days at 65 degrees F (18 degrees C) in glass
 - Age when judged (since bottling): 10 months

Judges' comments

"Rose flavor a bit overdone."



SPECIALTY BEER



GOLD MEDAL



AHA 1996 NATIONAL HOMEBREW COMPETITION

Category award sponsored by Homebrew Headquarters, Dallas, Texas.

HELEN CROY AND PHIL ROCHE PORTLAND, OREGON "GRAND CREW" SPECIALTY BEER

Ingredients for 10 U.S. gal (38 L)

- 24 lb Gambrinus pale malt (10.89 kg)
- 3 lb 20 °L crystal malt (1.36 kg)
- 2 lb dextrin malt (0.91 kg)
- 2 lb Vienna malt (0.91 kg)
- 6 lb honey (2.72 kg)
- oz organic New Zealand Hallertauer whole hops, 8.2% alpha acid (28 g) (45 min.)
- 1 1/2 oz coriander (43 g) (30 min.)
 - 1 oz organic New Zealand Hallertauer whole hops, 8.2% alpha acid (14 g) (30 min.)
- 1/2 oz coriander (14 g) (10 min.)
- 1 oz orange peel (28 g) (10 min.)
- 1/2 oz organic New Zealand whole Hallertauer hops, 8.2% alpha acid (14 g) (finish) Wyeast No. 1597 and 1711 Scottish ale and Belgian white liquid yeast cultures
- 1 1/2 cups corn sugar (355 mL) (to prime)
 - Original specific gravity: 1.090
 - Final specific gravity: 1.020
 - Boiling time: 90 min.
 - Primary fermentation: 14 days at
 72 degrees F (22 degrees C) in glass
 - Secondary fermentation: 14 days at 72 degrees F (22 degrees C) in glass
 - Age when judged (since bottling): six months

Brewers' specifics

Mash grains at 154 degrees F (68 degrees C) (90 min.). Sparge with 180-degree-F (82-degree-C) water to collect 10 gallons (38 L).

Judges' comments

"Nice orange-coriander coming through. Balance with hops and malt very good. Good toasty flavor. Coriander fades to orange in aftertaste. Great beer!"

"Smooth alcoholic character. No astringent character from coriander. Excellent beer with a wonderful blending of spices."

CALIFORNIA COMMON BEER



GOLD MEDAL

AHA 1996 NATIONAL HOMEBREW COMPETITION

Category award sponsored by Anchor Brewing Co., San Francisco, California.

PHILIP GRAVEL LISLE, ILLINOIS "STRAPPING STEAM BEER" CALIFORNIA COMMON BEER

Ingredients for 6 U.S. gal (22.7 L)

- 6 lb DeWolf-Cosyns Pilsener two-row malt (2.72 kg)
- 9 lb DeWolf-Cosyns Munich light malt (0.45 kg)
- 1/2 lb CaraPils dextrin malt (0.23 kg)
- 1/4 lb 40 °L crystal malt (113 g)
- 1/4 lb 90 °L crystal malt (113 g)
- 1 1/2 oz Cluster hop pellets, 7.3% alpha acid (43 g) (60 min.)
- 1 1/2 oz Cluster hop pellets, 7.3% alpha acid (43 g) (60 min.)
- 1/2 oz Brewers Gold hops, 7.6% alpha acid (14g) (60 min.)
- 1/2 tsp Irish moss (7.4 mL) (15 min.) hydrated in 1 cup (237 mL) warm water
- oz Northern Brewer hop plugs,
 7.8% alpha acid (28 g) (20 min.)
 Wyeast No. 2112 California lager liquid yeast cultures
- 5 oz (wt) corn sugar (142 g) (to prime)
- Original specific gravity: 1.044
- Final specific gravity: 1.014
- Boiling time: 75 min.
- Primary fermentation: seven days at 60 degrees F (16 degrees C) in glass
- Secondary fermentation: seven days at 60 degrees F (16 degrees C) in glass
- Age when judged (since bottling): three months

Brewer's Specifics:

Mash grains at 120 degrees F (49 degrees C) (30 min.), 138 degrees F (59 degrees C) (25 min.); 152 degrees F (67 degrees C) (35 min.). Heat mash to 175 degrees F (79 degrees C) for mash out. Sparge with 180-degree-F (82-degrees-C) water to collect seven gallons (26.5 L)

Judges' comments

"Very fruity — appropriate for the style but maybe a little too pronounced."

"Wonderfully drinkable beer. Very refreshing. Balance leans a bit far to bitterness. Relatively low hop flavors and caramel does not come through."

"Subtle toffee, sweet plum maltiness with dominant bitter finish. Some astringent, citrus rind hints in long finish distract from malt balance. Nicely effervescent."

TRADITIONAL MEAD AND BRAGGOT



GOLD MEDAL

AHA 1996 NATIONAL HOMEBREW COMPETITION

Category award sponsored by Mazer Cup Mead Competition and Ann Arbor Brewers Guild, Ann Arbor, Michigan.

SCOTT MILLS LOVELAND, COLORADO "MIGHTY FINE WINE" STILL TRADITIONAL MEAD

Ingredients for 5 U.S. gal (19 L)

- 15 lb wildflower honey (6.8 kg)
- 1 tbsp crushed coriander (14.8 mL)
- 1 tbsp dried orange peel (14.8 mL) Wyeast No. 3184 sweet mead liquid yeast culture
- Original specific gravity: 1.110
- Final specific gravity: Not available.
- Primary fermentation: 60 days at 65 degrees F (12 degrees C) in glass.
- Secondary fermentation: 210 days at 65 degrees F (18 degrees C) in glass.
- Age when judged (since bottling): three months

Judges' comments

"Honey comes through very nicely."

"I would like a touch more alcohol to balance the sweetness, but very nice."

"Clean, excellent honey presence and delicate, smooth sweetness."

Excellent mead, wonderful balance, good honey presence, nice pH level."



UIT AND GETABLE MEAD



GOLD MEDAL

1996 Meadmaker of the Year

AHA 1996 NATIONAL HOMEBREW COMPETITION

Category award sponsored by The National Honey Board, Longmont, Colorado.

MICHAEL COEN KENOSHA, WISCONSIN "AFTER DINNER DESSERT" STILL MELOMEL

Ingredients for 5 U.S. gal (19 L)

- 4 lb orange blossom honey (1.81 kg)
- 12 lb generic clover/wildfower honey (5.44 kg)
- lb red raspberries (2.72 kg)
- 3 1/2 lb blueberries (1.59 kg)
 - 4 tsp acid blend (19.7 mL)
- 1 1/2 tsp Irish moss (6.2 mL)
 - 4 tsp yeast nutrient (19.7 mL)
 - cups Wyeast No. 3184 sweet mead
 - liquid yeast Culture (500 mL)
 - Original specific gravity: 1.100
 - Final specific gravity: 1.024
 - Primary fermentation: two weeks at 66 degrees F (19 degrees C) in glass
 - Secondary fermentation: 51/2 weeks at 66 degrees F (19 degrees C) in glass
 - Tertiary fermentation: five weeks at 66 degrees F (19 degrees C) in glass
 - Age when judged: 13 months

Brewer's specifics

Boil honey and Irish moss with 5 gallons (19 L) of water for 20 minutes. Add fruit, yeast nutrient and acid blend. Stabilize temperature at 160 degrees F (71 degrees C) for 15 minutes. Cool with wort chiller, pitch yeast starter culture and aerate.

Judges' comments

"Very good, really like the berry flavor, good job. This is sweet but could use more honey tones."

"Sweet, fruity, smooth finish, good balance, clean."



GOLD MEDAL

AHA 1996 NATIONAL **HOMEBREW** COMPETITION

Category award sponsored by American Mead Association, Grand Junction, Colorado.

MIKE RIVARD CHICAGO, ILLINOIS "URBAN GARDEN METHEGLIN" STILL METHEGLIN

Ingredients for 2 U.S. gal (7.57 L)

- 5 lb clover honey (2.27 kg)
- bunch lemon thyme
- 3-inch cinnamon stick 1
- whole allspice
- whole peppercorn Lalvin No. EC-1118
- tsp yeast nutrient (10 mL)
- Original specific gravity: 1.120
- Final specific gravity: 1.030
- Primary fermentation: 30 days at 65 degrees F (18 degrees C) in glass
- Secondary fermentation: five months at 65 degrees F (18 degrees C) in glass
- Age when judged: five months

Brewer's specifics

Boil spices in 1 1/4 gallon (4.73 L) water, then steep for one hour. Strain spices out and add honey to water.

Judges' comments

'This metheglin is pleasantly balanced and lacks 'off' characteristics. Finishes pleasantly and carries with a nice blend of honey and pepper. Spices just at the flavor threshold: there, but not obnoxious."

"It is tough to sort out the individual components, but this mead does deliver a fine package. I would love this mead with a nice chicken or fish meal. Damn fine."

"All flavor comes through. Cinnamon, allspice and peppercorn come in with a taste of honey. Good alcohol flavor, none of the ingredients are overpowering."

"Good, clean mead and very drinkable. No overpowering character. Honey comes through."

CIDER



GOLD MEDAL

1996 Cidermaker of the Year

AHA 1996 NATIONAL HOMEBREW COMPETITION

Category award sponsored by Lyon's Brewery of Dublin, Dublin, California.

GINGER CONSTANTINE BAR HARBOR, MAINE **BOG AND ORCHARD CRANBERRY CIDER** SPECIALTY CIDER

Ingredients for 4 1/2 U.S. gal (17 L)

- 4 1/2 gal apple cider (see brewer's specifics) (17 L)
- 7 1/2 lb organic cranberries (3.4 kg)
 - cups corn sugar (1.9 L) Red Star Montrachet yeast
 - tsp tannin powder (4.9 mL)
 - Campden tablets, crushed and added at 1.020 gravity
 - cup corn sugar (118 mL) (to prime)
 - Original specific gravity: 1.070
 - Final specific gravity: 1.005
 - Primary fermentation: three weeks at 55 degrees F (13 degrees C) in glass.
 - Secondary fermentation: 18 weeks
 - at 35 degrees F (2 degrees C) in glass · Age when judged: three months

Brewer's specifics

Press approximately 1 1/2 bushels of apples to get 4 1/2 gallons (17 L) cider. Use 40 percent sweet (Cortland, Spartan), 20 percent acidic (Jonathan, Northern Spy), 30 percent aromatic (MacIntosh) and 10 percent astringent (wild apples and crab apples). Put fresh cider in carboy. Add five cups (1183 mL) dextrose dissolved in one quart cider to raise gravity to 1.070. Pitch yeast and ferment one week at 65 degrees F (18 degrees C).

Boil cranberries then squeeze juice through sanitized cheesecloth. Add juice to carboy. Adjust sweetness with three cups (710 mL) dextrose and add tannin. Ferment at 50 degrees F (10 degrees C). When gravity reaches 1.020 add crushed Campden tablets to stall fermentation. Condition at 30 degrees F (0 degrees C) Rack monthy to increase clarity. Prime and bottle when gravity reaches 1.005.

Judges' comments

"Nice mellow cranberry flavor. Good mix of cranberry and apple flavors. A slight acidic beginning."

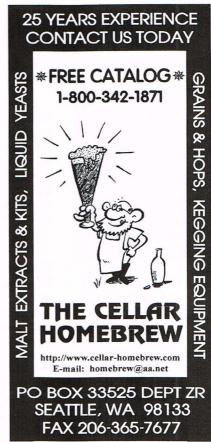
"Good job - looks and tastes very good. No tartness, which usually comes with cranberries. Well-controlled."

"Good fruit, acidity and dryness characteristic of cranberries. Pleasant acidic finish. Nice effort."

"Very drinkable. Shows the fruit well. No obvious flaws. Very good effort and on style.'

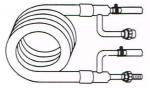








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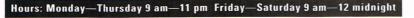
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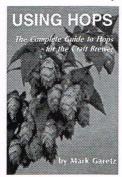
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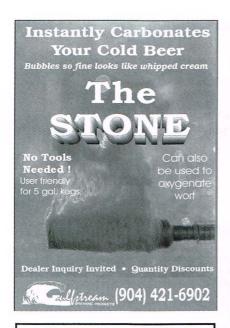
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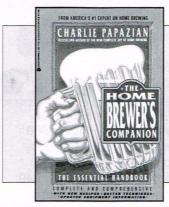
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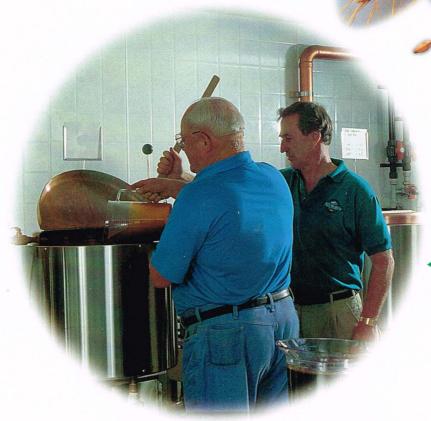


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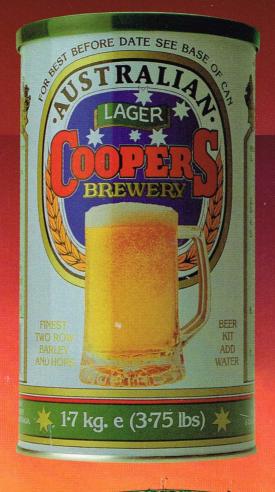
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