

Vol. 26 No. 4 July/August 2003 The Journal of the American Homebrewers Association

ZYMURGY

FOR THE HOMEBREWER AND BEER LOVER

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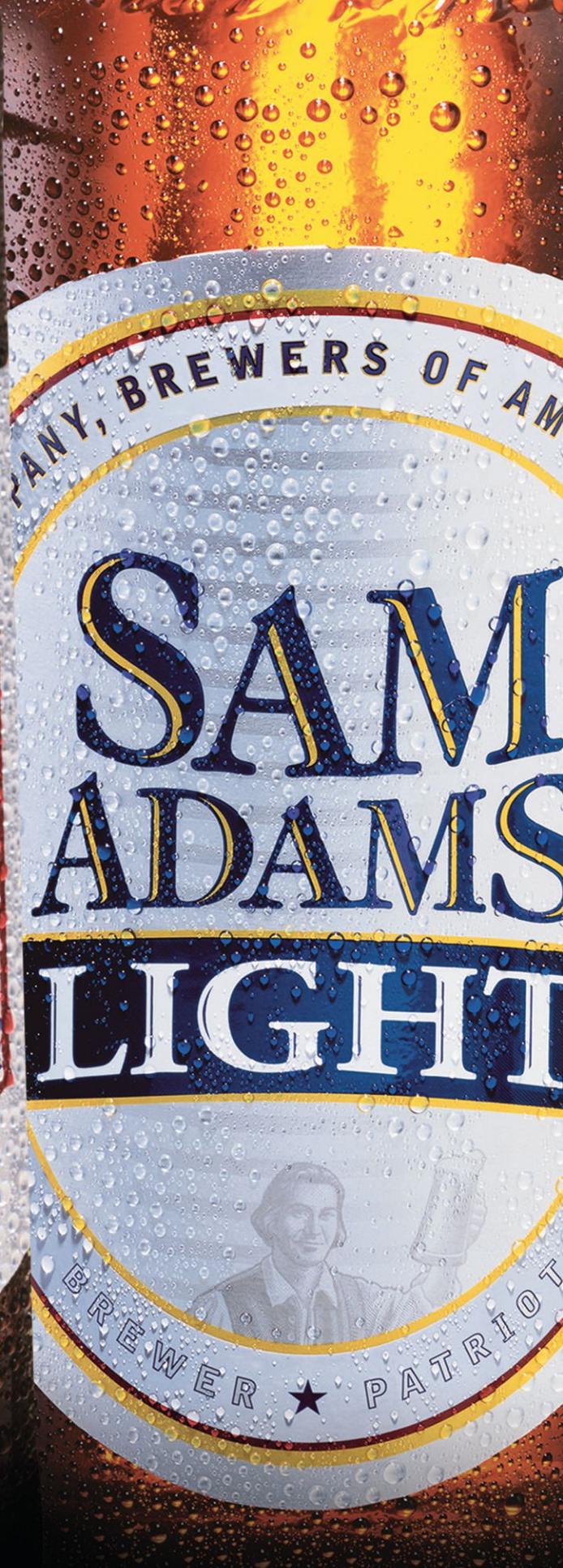
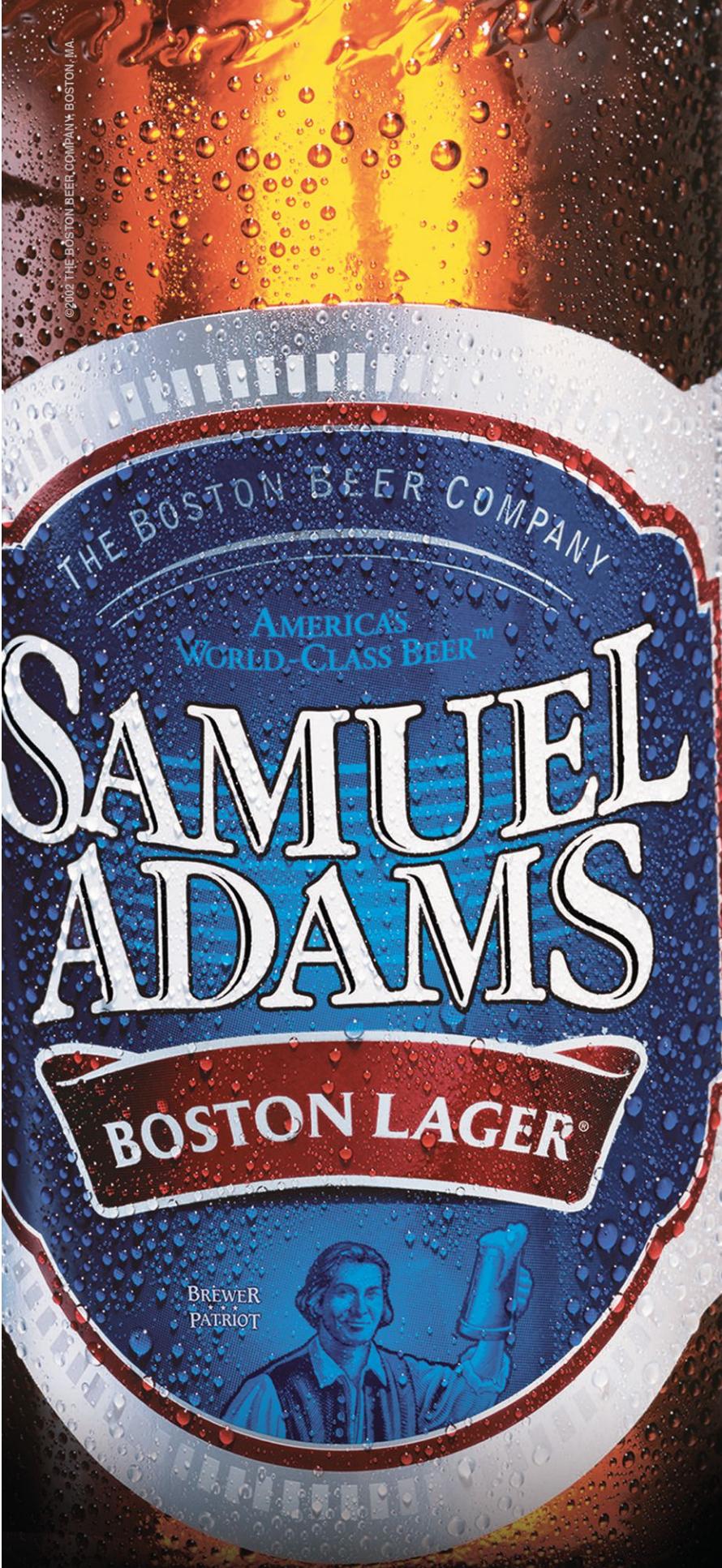
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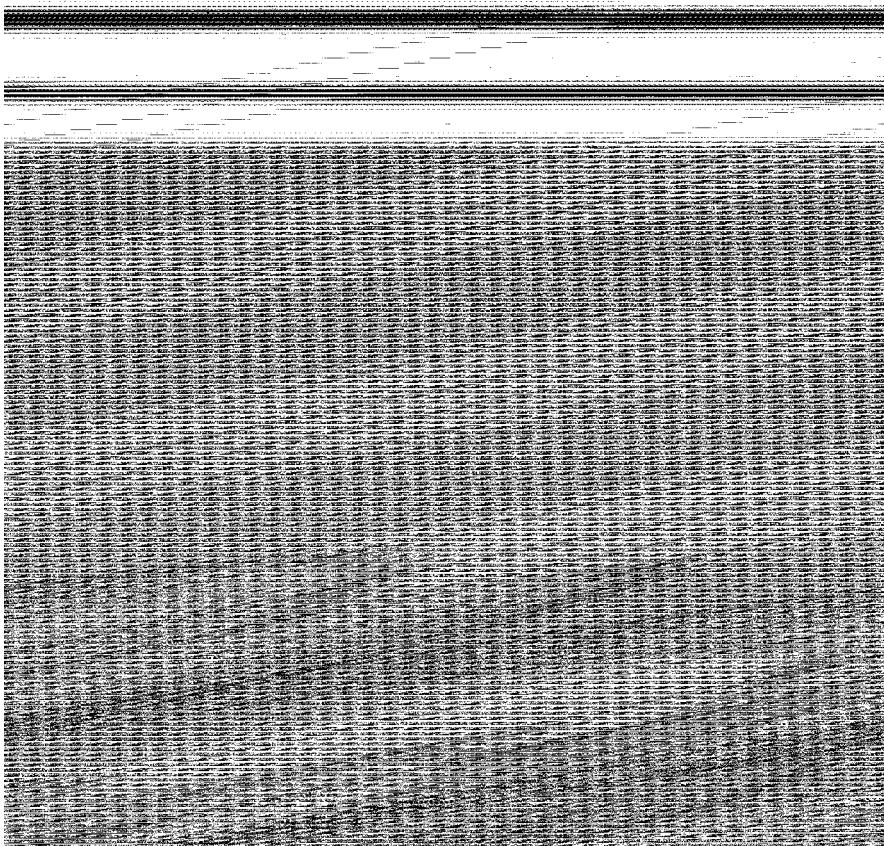
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ZYMURGY®

Zymurgy \zī'mər jē\ n: the art and science of fermentation, as in brewing.

OUR READERS SPEAK! BEST BEERS IN AMERICA SURVEY

18

Back in January we asked you, our readers, to name your favorite beers. Now we've got the results. The top beers are no surprise (at least not to us!) but several little-known cult beers snuck into the top tiers of the list. This story lays out the list and an interesting analysis of the results while paving the way for the boat-load of clone recipes that fill this issue.

By Ray Daniels

ANCHOR SUSTAINS AMERICA'S BREWING HISTORY

26

With all four of their year-round beers in the top ranks of our survey, Anchor gets the nod as the favorite brewery of homebrewers. Here we review the brewery's history and get down to the business of homebrewing some great-tasting knock-offs.

By Amahl Turczyn Scheppach

GREAT BEER FROM KALAMAZOO? YOU BET!

32

The Kalamazoo Brewing Co. ran neck-and-neck with Rogue Ale for having the most beers in our survey, scoring with 11 beers overall. To celebrate we give you clone recipes for all of them!

By Mike Bardallis

A BEVY OF BELGIAN ALE CLONES

38

From New Belgium to Duvel to Brewery Ommegang, our readers have an appreciation for Belgian and Belgian-inspired ales. We take a look at these three breweries and serve up clone recipes for Fat Tire Ale, Duvel and Ommegang Abbey Ale.

By Dana Johnson, Bev Blackwood II and Jeff Sparrow

HEAVENLY BREWS: SAINT ARNOLD'S AMBER AND FANCY LAWNMOWER

43

From down south we found two beers that have won the loyalty of homebrewers—including one that is great for summer weather. As usual, we give you the clone low-down so you can brew them yourself.

By Bev Blackwood II

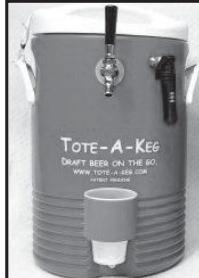
EVEN MORE CLONES FOR TOP-RANKED BEERS

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Note: The "clone" recipes included in this issue were developed by Zymurgy staff and contributors. Unless specifically noted, the recipes have not been reviewed or approved by the breweries themselves. Zymurgy makes no representation that the recipes included in this issue match the actual ingredients of the commercial model, only that they will produce a reasonable reproduction of the flavor profile and physical attributes of the commercial product. As always, your results may vary depending on brewing equipment and conditions.

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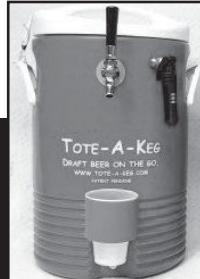


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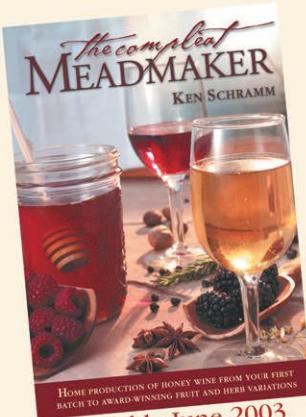
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Celebrating Twenty-five Years



BY PAUL GATZA

American Beer Month and the Pub Discount Program

July is American Beer Month. To celebrate, I will have an American beer on each day of the month. I will attend events. I will make my own American beer. I will encourage others to do the same.

We kicked off American Beer Month a few years ago in our professional craft brewing division. Last year we rolled out our Association of Brewers Pub Discount Program on July 1 in an effort to connect the amateur and professional brewing communities. Since then, we have signed on more than 180 pubs to participate in giving special discounts to AHA members, and we have helped American brewers sell more beer. While there are still some bugs that need to be ironed out at the server and management level of a few pubs, we are aggressively working to add more breweries and beer bars to the program. The list as of mid-May is printed as a handy pullout section in this issue of *Zymurgy*.

American Beer Month works where people take the time to promote it and make it work. In a beer bar known as the Great Lost Bear in Maine, American beers were the top nine sellers in July 2002 followed by Guinness at number 10. The following month Amstel Light returned to number four and Guinness to number five. For the month of July this pub sold more U.S. beer than it otherwise would have and had something fun and different to promote to customers.

We recently surveyed you on your favorite beers. Thanks for your input. It surprises me how many beers are on the list that have relatively small distribution. This issue has clone recipes for a large number of beers. In fact, I do not recall another issue of *Zymurgy* that has had as many recipes in it as this one.

To find out the latest American Beer Month-related events, check out www.americanbeermonth.com.



americanbeermonth.com. If you know of any that aren't registered there, go ahead and add the details. American Beer Month is a grassroots campaign by and for American brewers and consumers, and your involvement is welcome.

The Brewing Bug and Mead Day, August 2

I hope your kettles have been as fired up as mine so far this year. I have been on a brewing binge this spring, re-catching the bug and making batch after batch. I am an outdoor brewer. I think to some degree I am brewing more this year because I was limited last year by an extensive fire ban

in the hills west of Boulder. While the reservoirs are still low due to years of drought, the fire danger has dropped due to some large and frequent snowstorms that hit Colorado this year. Also, I am running low on beer. Whatever the cause, the bug has bitten me again.

My favorite thing to brew in the summer is mead. I like to think that mead is more forgiving than beer in the elevated temperatures that prevail over most of the country over the summer months. Last Mead Day, Association of Brewers staff met in Gary Glass's garage in Boulder's Sunshine Canyon to make sack mead. It will be good to sample last year's product while we brew anew.

American Homebrewers Association member John Carlson says "a great mead starts out delicious and gets better over time." As long as you rack your mead fairly regularly and keep it topped up, there is not much difference between the conditions of the mead whether it is in a carboy or whether you get it into bottles right when it has fermented out and cleared.

Mead Day is a concept developed out of the AHA membership grassroots by Ed

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Busch of New Jersey a couple of years ago. The idea is to make, enjoy and think about mead on the first Saturday of August. Feel free to think about it on more than that day if you so choose. Sometimes I think we are in the infancy of mead rediscovery in this country, much the way homebrewing was positioned 25 years or so ago. More and more people seem to be aware of mead and have heard something about its history as a Middle Ages drink of many cultures or of

**John Carlson says "a great
mead starts out delicious
and gets better over time."**

the relationship between mead and the honeymoon tradition. The concept is easier for the uninitiated to grab than home beer making, as everyone has experience with bees and honey and the brewing process is simpler.

Mead Day functions like the other brewing days we coordinate. There will be an online registration and remittance area with a sample recipe to use or deviate from. Visit www.beertown.org for registration and program information.

Coopers Malt is AHA Club-Only Competition Sponsor

Cascadia, the company that imports Coopers malt to North America, has signed on for a new sponsorship of the American Homebrewers Association club-only competitions. Coopers has long been a sponsor of the Homebrew Club of the Year Award, presented each June at the AHA National Homebrewers Conference. Coopers is unique (to my knowledge) in the industry in being a malt and malt extract provider that is also a commercial brewer. The sponsorship details include a sample style recipe for each competition to be included in the Clubs Report. The AHA wishes to thank Mark Henry, Cascadia and Coopers for their support of homebrewing, the AHA and homebrew clubs.

**Paul Gatz is director of the American
Homebrewers Association.**

BY RAY DANIELS

Homebrew Pro-Brew Convergence

Maybe the stars have aligned just right or maybe it is just because some nice round numbers are involved, but I've been thinking a lot the last few days about how pro brewers succeed by acting like homebrewers.

"Round numbers?" you ask. Well, yes. This year marks the 25th anniversary of the founding of the American Homebrewers Association and its parent organization, the Association of Brewers. Also, as I write this, I have just returned from the 20th annual Craft Brewers Conference (CBC) in New Orleans. (The numerologist in me likes both "25" and "20"—especially when they occur together.) Furthermore, the CBC was held at the same hotel that hosted the National Homebrewers Conference in 1996, another point of convergence, albeit not numerical.

In reflecting on the history of this organization and the industry that it supports, it occurs to me that quite a number of folks have started out as homebrewers and made the shift to the pro side. Many years ago, they were reading *Zymurgy* and "relaxing" while they brewed but since then they have moved on, often brewing for or owning successful breweries whose products now appear in our refrigerators. That final pronoun is important too: "our refrigerators" means the refrigerators stocked by homebrewers—folks who make their own beer and therefore know the difference between world class craft and worthless crap when it comes to beer. (See related articles in this issue!)

So, let me share a few thoughts about the ways that pro brewers act like homebrewers in order to succeed.

Let's start with one of my favorite guys and someone who I learned something from at this year's CBC, Chuck Skyeck of the Boscos brewpubs in Tennessee and Arkansas. In a session on server training he discussed how to answer the oft-heard question, "Do you have a beer like [blank]?"



Brewpub operators like Chuck get this one a hundred times a day and even homebrewers are sometimes faced with such a question when offering beer to friends, so I was interested in his answer. And it surprised me. Rather than using the question as a lead-in to sell people on something similar to the beer they have named, they give

Rogue Ales recently came out with a "soba" beer prepared in cooperation with Iron Chef star Morimoto.

people a slap in the face. Regardless of what customers put in for "blank"—be it Budweiser or Sierra Nevada Pale Ale—Boscos servers are instructed to say: "I'm sorry, we don't have anything like that."

Whoa. That's bold. And it is so much like a homebrewer! It says right away that you should check your expectations at the door and give in to the opportunity to experience something new. Strikes me as a great response—but one that took some creative

thinking to come up with and a load of courage to implement when your paycheck is on the line. Of course, they follow that statement with one proclaiming that they do have a great line of excellent, flavorful beers and they would be happy to help the customer select one that they will like—but that is the easy part after delivering the big slap in the face. Brisk indeed.

Thinking about Chuck's approach, I'm reminded that audacity is certainly a feature of homebrewing but that we have no monopoly on that commodity. Rogue Ales recently came out with a "soba" beer prepared in cooperation with Iron Chef star Morimoto. That alone is not terribly audacious, but Rogue's whole pattern of behavior over the years certainly falls into that category. Quick, tell me what Rogue's flagship beer is. Don't know? I don't think they do either. They just keep making new beers, seasonal beers, little-big beers, big-little beers, chipotle beers, juniper beers, just beers, beers, beers. Don't they know that a commercial brewer is supposed to have one product that they push ahead of all others? Don't they know they are only supposed to have four products—five at the most—on the market at any one time? Maybe not. Or maybe they figure that if acting like homebrewers sells beer for them, they should just keep it up. And so they do.

Of course when it comes to audacity cranked up to the level of arrogance, no one comes to mind so quickly as the folks at Stone Brewing Co., who make Arrogant Bastard Ale. If you aren't familiar with their shtick with relation to this beer you can visit their Web site or just take it for granted that it is appropriately named.

But Stone's homebrew-like ways go beyond the marketing angles. Even in the brewhouse they do some things that only a homebrewer could love. At the CBC I shared a table with Stone head brewer Lee Chase and

he mentioned that they follow a "Cascade free" policy in their brewery. Now personally, I think that is cool. I had the same idea when I tried (unsuccessfully) to translate my homebrewing into pro brewing a number of years ago. Let's face it: everybody makes a Cascade-hopped pale ale or IPA or barleywine—sometimes all three. Anchor and Sierra Nevada distribute their versions nationwide and they are available in nearly any place that has decent beer. So why would an upstart brewery make another Cascade-infused pale ale?

A practical brewer would point out that if it works, don't fight it, or that since you can innovate in other ways, why worry about one variety of hops? But as a principle, the no-Cascades policy strikes me as being very homebrewer-like. Gutsy. Creative. Committed. I like it.

Another little pro-brew treat that I got to enjoy recently is something that definitely has its origins in homebrewing. This spring, I attended the first Festival of Barrel-Aged Beers (FoBAB) at Rock Bottom in Chicago. This

event shows the extent to which barrel aging of beers on a commercial scale has grown from its humble homebrew beginnings. Ten years ago (maybe longer) I remember some of the Chicago-area homebrewers acquiring a cast-off bourbon barrel and using it to age an imperial stout they had brewed. The result was interesting and intriguing.

Soon Goose Island was making a similar product, and before long Todd Ashman at Flossmoor Station Brewing Co. nearby was winning national awards with his barrel-aged strong beers. Now lots of folks have gotten into the act and at the CBC this year, there was even a hands-on demonstration in wood barrel maintenance and repair (very cool!). Here again homebrewers led the way. Furthermore, pro brewers have found attention and success by following that lead. That is definitely cool.

Finally, the keynote speaker at the CBC this year was Kim Jordan, president of New Belgium Brewing Co. in Colorado. New Belgium has grown rapidly in the mountain states area with a line of beers inspired by traditional Belgian ales. While still regional, they have grown to be one of the largest craft brewers, with prospects for catching up to Sierra Nevada very soon. Of course Kim is very serious about the brewing business and about the image of both New Belgium and the craft beer industry. But among her calls for things like "vision" and "quality" by today's craft brewers, she dropped another funny little item in there and told everyone that the industry needs to "cultivate weirdos."

Well, I suppose I could write a whole column on that remark alone and maybe I will someday. But it seems to me that her thought on weirdos goes straight back to homebrewing. It is the off-beat, the unexpected, the untried that has made American craft brewing vibrant and exciting. And no one has a better grip on innovation in brewing than the cadre of homebrewers in this country.

Maybe every one of us homebrewers isn't a weirdo, but we certainly have our share—in both positive and negative senses. But regardless of how you see yourself, rest assured that deep down, the big guys envy the freedom to brew as you choose. They want to be homebrewers again.

Ray Daniels is editor-in-chief of *Zymurgy*. 



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A Simple Carbonation Trick

Dear *Zymurgy*,

A common complaint, especially from anxious beginners, is that it is hard to know when bottled beer is properly carbonated. You hate to open a bottle only to find the beer is still flat. In his Classic Beer Style Series book *German Wheat Beer*, Eric Warner shows a clip-on pressure gauge on top of a weizenbier bottle in a German brewery, but few of us have such a device.

I was recently using a Carbonater Cap to carbonate some beer from a keg in a 1-liter PET bottle to take to a party. As the CO₂ was absorbed, the soft plastic bottle got firm and hard. This caused me to think: when bottling, why not just fill a small PET bottle at the same time? Then you could monitor the hardness of the bottle as CO₂ is produced to determine when there is enough carbonation. It's also easier to monitor the beer in a clear bottle than in brown long-necks. One last thought: be sure to keep the bottle out of light.

Jeff Renner

Dear Jeff,

Brilliant! How can it be that homebrewers have faced this problem for so long and not hit upon this easy and useful method? All we need now is a method of quantifying "bottle hardness" and we can create a standard procedure!

—Ed.

What the Papian's Going On?

Dear *Zymurgy*,

I had to laugh at the listing of "papian" as a clarification aid. Is this Charlie bringing in the Armenian spelling? Or just a contraction of Papazian? He's been clarifying things of homebrewers for 25 years.



This photo was sent to us by *Zymurgy* reader Stephen Crawford. It was taken at Olive Brew, his home brewery in Krumville, New York.

Cheers,
Jim Koch
Boston Beer Co.

Dear Jim,

Nice to know that we are keeping you amused—a fair trade given that our readers drink so much of your beer.

Of course, "papain" is a protein-cleaving enzyme derived from papaya and certain other plants that is sometimes used in the brewing industry to digest haze-causing proteins and help clarify beer. We've never seen it in a homebrew store or used any ourselves, but we hear it works wonders.

*Cheers,
—Ed.*

Wondering About Wheels

Dear *Zymurgy*,

In your January/February 2003 issue on page 42 there is a sidebar by Ray Daniels about Dr. Bob Technical's wheels of beer. I

have searched the Internet but cannot find this handy device for brewing. Your help would greatly be appreciated.

Thanks,
Mike Brown

Dear Mike,

We keep ours handy (especially during preparations for this issue), but haven't seen them in a store in a while. If your local homebrew shop doesn't carry them, you can order them from the AHA's customer service hotline at 1-888-822-6273.

—Ed.

C'mon, Give Mike a Chance

Dear *Zymurgy*,

I was very disappointed in the rejection of Mike Focht's idea regarding having homebrewers compile information about a particular style and then having the "fresh" information printed in *Zymurgy*.

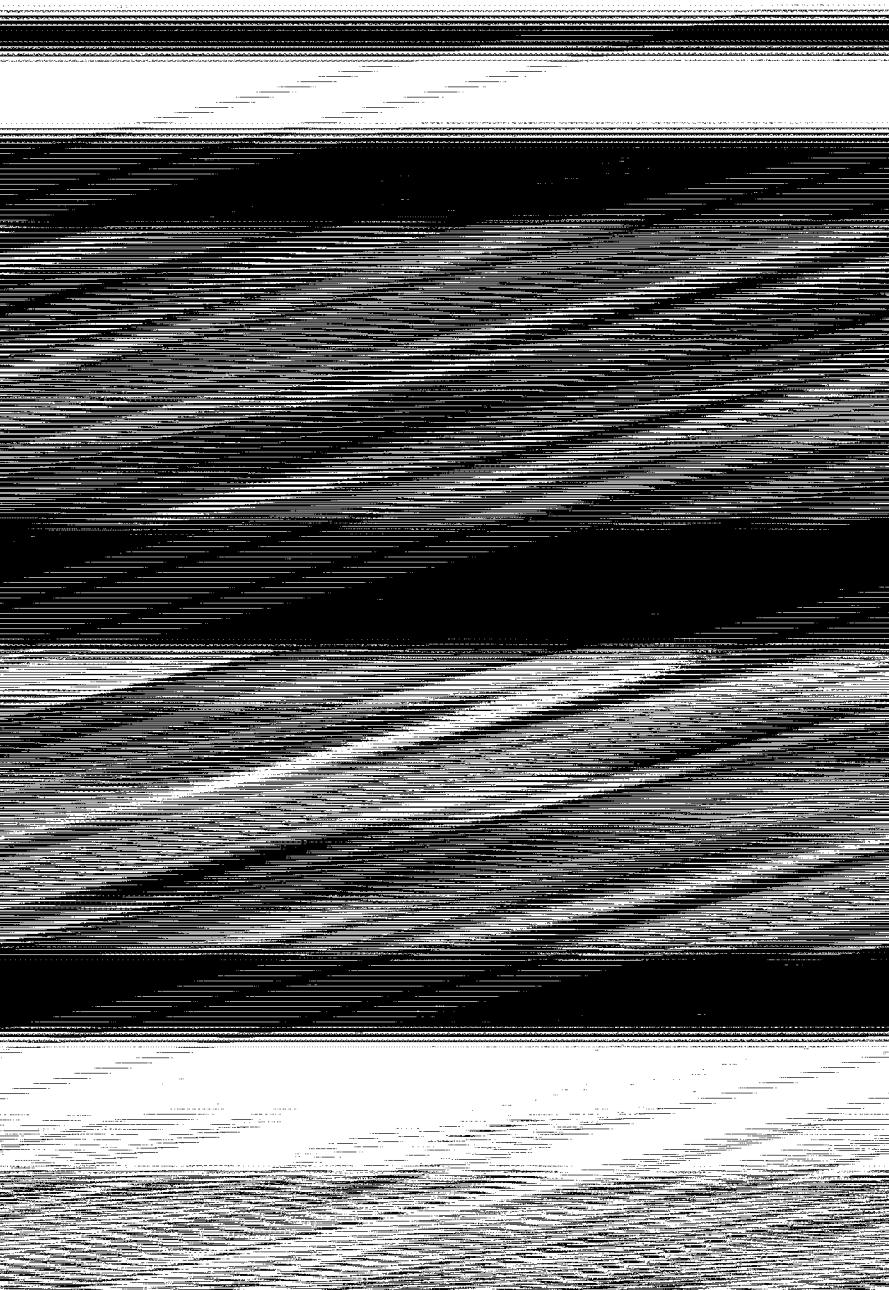
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I think if you understood Mike's, aka Mikeweiser's, background you would realize the dedication that he could bring to a project like this. And I know he would only want to further the hobby.

A few years ago Mike started BABE (Big Ass Beer Exchange) among members of the Brew Rats homebrew club. Twelve of us exchange aged beers that must be at least 1.080 OG. The beers are scored online and at

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to determine when there is
enough carbonation.**

the end of the BABE season we crown "Ode Rat." Now Mike has started UBER BABE. The OG of each beer must be at least 1.115.

Projects like this have helped us understand the best methods for making high gravity beers. An example would be boiling down the first runnings of a wee heavy.

I feel that at the very least you could have offered Mike the opportunity to submit an article about either barleywines or high gravity brewing.

Thanks for listening,
Shaun Vickers

Dear Shaun,

Sounds like good stuff. We would happily entertain a story proposal for a feature on "Secrets and Tips for Making Big Ass Beers."
—Ed.

Send your letters to "Dear Zymurgy," PO Box 1679, Boulder, CO 80306-1679; fax 303-447-2825 or e-mail ray@aob.org. Hey homebrewers! If you have a homebrew label that you would like to see in our magazine, send it to Kelli McPhail, Magazine Art Director, Association of Brewers, 736 Pearl Street, Boulder, CO 80302 or e-mail it to kelli@aob.org.

BY GARY GLASS

AHA Club-Only Competitions

By the time you get this, we will be announcing the American Homebrewers Association 2003 Homebrew Club of the Year winner. Going into the second round of the National Homebrew Competition, we have a tighter race for the trophy than we've



had in a few years. Reigning champs Quality Ale and Fermentation Fraternity (QUAFF) of San Diego are in the

hunt, as are the Urban Knaves of Grain (Co-HCOY winners with the Oregon Brew Crew in 1999) of the Chicago area who hope to hoist the trophy before their home crowd at the National Homebrewers Conference. Also in serious contention for the trophy are the hosts of the new East Region of the NHC based in Cleveland, Ohio, Society of Akron Area Zymurgists (SAAZ), and the Great Northern Brewers of Anchorage, Alaska.

Wrapping up the National Homebrew Competition means we are getting ready to launch into a new round of AHA Club-Only Competitions. This past year has seen a great increase in enthusiasm and participation in the Club-Only Competitions. We expect that this year's cycle will be even better. The AHA is pleased to announce that the 2003-2004 Club-Only Competition series and the 2004 Homebrew Club of the Year



Award will be sponsored by Coopers Brew Products. Coopers Brew Products makes high quality extract kits, unhopped canned malt extracts and dried malt extracts. All of

the Coopers extract products are produced at the Coopers Brewery. We very much appreciate Coopers' continuing support of homebrew clubs. For more information about Coopers and its homebrewing products, see www.cascadiabrew.com.

The AHA Club-Only Competitions are an excellent means for your club's members to familiarize themselves with brewing particular styles. Most participating clubs will host inter-club competitions to determine which entry to advance to the Club-Only Competition. In the process, brewers get valuable feedback on their brewing from fellow club members. The competitions themselves, since they are small and draw lots of highly qualified judges, tend to be very well run and entrants get excellent comments on their entries, which they can share with the rest of their club members.

As all competitions should be, the Club-Only Competitions are a lot of fun. Susan Ruud, whose club, the Prairie Homebrewing Companions of Fargo, N.D., hosted the

Brown Ales Club-Only Competition last April, reported having judges drive 250 miles to participate in the competition. One club was so excited about the competition that they sent in their entry a full six weeks before the judging! "I don't think of hosting

**The AHA Club-Only Competitions are
an excellent means for your club's
members to familiarize themselves
with brewing particular styles.**

an event like this as work," says Ruud, "but rather a good reason to get together with fellow homebrewers."

Hosting these smaller Club-Only Competitions is also a great way for clubs thinking of putting on their own competitions to gain some experience without the stress of starting from scratch. "Although Hogtown Brewers has a fairly good number of judges with a lot of experience at judging in the local and regional competitions, we'd never hosted a competition before," states Mark Tumarkin, one of the organizers of December 2002 "Fruits & Veggies" Club-Only Competition held in Gainesville, Fla. "Everyone had a great time, and we were able to build enough support for the idea of holding a full-on competition that we're going to go for it." We currently have host clubs lined up into 2006. If your club is interested in hosting a future Club-Only Competition, contact gary@aob.org or call the toll free number, 888-822-6273.

Online Clubs List

Hopefully by now you have all had a chance to check out the new and improved

2002-2003 Club-Only Competition Standings as of April 13, 2003

Points	Club
20	Strange Brew
16	Upstate New York Homebrewers Association
12	Edmonton Homebrewers Guild
12	Hampton Roads Brewing and Beer Tasting Society
12	James River Homebrewers
12	Kansas City Bier Meisters
8	Down River Brewers Guild
8	Fellowship of Oklahoma Ale Makers
8	Great Northern Brewers
4	Foam On The Range
4	Minnesota Home Brewers Association
4	Prairie Homebrewing Companions

2003-2004 AHA Club-Only Competition
Sponsored by Coopers Brew Products



Month	Style or Name	Cat. #	Host
August	European Pale Lager	2	Foam on the Range
Sept	Specialty/Experimental/ Historical Beers	24	Colonial Ale Smiths & Keggers
Nov	Koelsch & Altbier	8	Pacific Gravity
Dec	Barleywine	12	Dunedin Brewers Guild
Mar/Apr	Mead	25	Great Northern Brewers
May	Extract Beers	1-24	Bluff City Brewers

(Entries must include extract in recipes)

Bohemian Pilsner



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

1 can Coopers Brewmaster's Pilsner Kit
 3.5 lb (1.6 kg) Coopers Light Dry Malt Extract
 4.0 oz (113 g) Crystal Malt 100 L
 1.5 oz (43 g) Saaz (60 min)
 0.25 oz (7 g) Saaz (5 min)
 0.5 tsp Irish Moss
 Wyeast 2124 Bohemian Lager or White Labs
 WLP802 Czech Budějovice Lager Yeast
 0.75 C (180 ml measure) corn sugar for bottling

- Original specific gravity: 1.052
- Final specific gravity: 1.012
- IBU: 40
- ABV: 5.3%

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Association of Brewers

beertown ORG

www.beertown.org Web site. Ever since the launch of the new site, we've been working on putting up a new clubs list. The new clubs list should be up on the Web site by the time you receive this issue of *Zymurgy*. The list posted on the old site had outdated information on it, so we wanted to start over with a new and accurate clubs list. To do this, WE NEED YOUR HELP! Please check the clubs list on beertown for your club. If your club is not listed, please add it. If your club's information is posted inaccurately, please update it. Also, be sure to update your club's listing any time the contact information changes.

Brown Ale Club-Only Competition

The AHA thanks Susan Ruud and the Prairie Homebrewing Companions of Fargo, N.D. for hosting the Brown Ale Club-Only Competition on April 12. This was the fifth of six competitions in the August to May 2002-2003 cycle, with points going toward the Homebrew Club of the Year trophy. Points are awarded on a 12-8-4 basis for first, second and third place in the club-only competitions. First, second and third places in the first and second rounds of the AHA

National Homebrew Competition earn points on a 6-4-2 basis. The club whose members have amassed the most points over the year will be crowned the Homebrew Club of the Year at the AHA National Homebrewers Conference in Chicago June 19-21, 2003.

Of the 54 entries the winners were:

First Place

Ray Lewis of Livonia, N.Y.
Representing the Upstate New York Homebrewers Association with his Sweet Home Alabama Brown, Southern English Brown

Second Place

Pat Heveron of Newberg, Ore.
Representing Strange Brew with his American Brown Ale

Third Place

Jon Sanders of Aurora, Colo.
Representing Foam On The Range with his Birdman Mild II, Mild Ale
Congratulations to all of the winners, and thanks to all of the club representative brewers who entered!

European Pale Lager AHA Club-Only Competition

The August AHA Club-Only Competition is European Pale Lager. The competition is hosted by Tom Gardner and Foam On The Range of Denver, Colo.

The style for the competition is European Pale Lager, BJCP Category 2. One

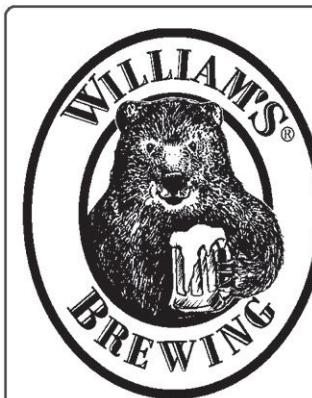


entry of two bottles is accepted per AHA registered homebrew club. Entries require a \$5 check made out to AHA, an entry/recipe form and bottle i.d. forms. More information on the club-only competitions and forms are available at www.beertown.org. Please send your

entry to:
AHA COC
c/o Ruddell's Custom Print
4853 South Quintero Circle
Aurora, CO 80015

Entries are due by July 25, 2003. Judging is slated for August 2, 2003. E-mail for questions or those interested in judging is TomAGardner@cs.com.

Gary Glass is project coordinator for the American Homebrewers Association.



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CALENDAR

AMERICAN HOMEBREWERS ASSOCIATION

JUNE

19-20 AHA National Homebrew Competition 2nd Round. Rosemont, IL. **AHA SCP.** All entries that placed in the AHA first round regional competitions are eligible to compete in the second round. This competition will be held at the AHA National Homebrewers Conference in Chicago, where Homebrewer of the Year, Meadmaker of the Year and Homebrew Club of the Year will be announced during the awards ceremony. Entry Deadline: 6/9-6/13. Local Contact: Stephen McKenna, 630-305-0554, mckennst@earthlink.net AHA Contact: Gary Glass, Phone: 303-447-0816 x 121, Fax: 303-447-2825, E-mail: gary@aob.org, Web: www.beertown.org

19-21 American Homebrewers Association's National Homebrewers Conference. Rosemont, IL. Holiday Inn Chicago-O'Hare International. "Sweet Home Brew Chicago." Join us at the American Homebrewers Association's 25th Annual National Homebrew Conference. Meet up with all your homebrewing cronies with the opportunity to learn more about your favorite hobby, homebrewing! See ya in Chicago. Contact: Jessica Gottlob, Phone: 303-447-0816 x 145, Fax: 888-U-CAN-BREW x 145, E-mail: jessica@aob.org, Web: www.chibeer.org/aha03/

21 19th Annual Calgary Open Homebrew Competition. Calgary, AB. **AHA SCP.** A mixed class BJCP style guideline open competition with prizes and certificates/medals for the winners of each class. Special fun class is the "best lawnmower beer" redefined positively as the most thirst-quenching beer to have after working in the sun on a hot day! Judged in the sun on the Summer Solstice! Sponsored by: Marquis De Suds. Contact: Tim Oborn, Phone: 403-289-2551, Fax: 403-777-7079, E-mail: timoborn@shaw.ca

28 Mother Lode Fair Homebrew Competition. Sonora, CA. **AHA SCP.** Mother Lode Fairgrounds, Sonora. Judging will begin at 11 a.m. This competition is open to all California residents. Entry forms and \$5 entry fee for each entry must be received by June 17. All beers must be received by 5 p.m., June 24. You may have your entries delivered to Mother Lode Fair Administration Building, 220 Southgate Drive, Sonora, CA 95370. Sponsored by: Parrott's Ferry Home Brew Club. Fee: \$5. Contact: Bill Neilson, Phone: 209-533-0360, E-mail: neilson@pfhbc.org, Web: www.pfhbc.org

29 16th Annual Southern California Homebrew Championships. Corona, CA. **AHA SCP.** Main Street Brewery, 300 Main Street in Corona. Drop off entries at the brewery or mail to Bruce Bradigan, 2675 Sunny Hills Drive, Norco, CA 91760 by June 28. Fees: \$5. Contact: Christy Elshof, Phone: 909-798-0860, E-mail: brewchick@hotmail.com, Web: www.hopheads.com

30-July 5 Orange County Fair Homemade Beer Competition. Costa Mesa, CA. **AHA SCP.** Homemade Beer Competition open to California residents. Sponsored by: Barley Bandits. Entry Deadline: 4/15-6/14. Fees: \$5 for 1st entry, \$2 for each add. Awards Ceremony: 7/19. Contact: Julie MacRae, Phone: 714-708-1553, E-mail: jmacrae@ocfair.com, Web: www.ocfair.com

JULY

1-31 American Beer Month 2003. Everywhere, USA. "Discover the Flavors of Independence" Plan your events and promotions early! Contact: Monica Tall, Phone: 303-447-0816; 888-822-6273, E-mail: monica@aob.org, Web: www.americanbeermonth.com

12 Indiana State Fair Brewers Cup. Indianapolis, IN. **BJCP SCP.** Contact: Anita Johnson, Phone: 317-257-9463, E-mail: anita@greatfermentations.com Web: www.brewerscup.org/

12 E.T. Barnette Homebrew Competition. Fox, AK. **AHA SCP.** Sponsoring Club: Zymurgists Borealis. BOS grand prize \$500! Six classes will be judged: Dark Ale, Light Ale, Dark Lager, Light Lager, Specialty/Mixed style, and Mead. Great prizes and custom medals will be awarded to 1st, 2nd and 3rd place in each of the six judged classes. Entry Deadline: 6/23-7/10. Fee: \$5. Contact: Scott Stihler, Phone: 907-474-2138, E-mail: stihlerunits@mosquitonet.com, Web: www.mosquitonet.com/~stihlerunits/Scotts Den/Beer/Events/Events.html

12 Amador County Fair. Plymouth, CA. **AHA SCP.** Homebrew contest held prior to the opening day of the County Fair with the winners and a homebrew display set up at the Fair. Sponsored by: Brew Angels. Entry Deadline: 5/12-6/27. Awards Ceremony: 7/12. Contact: William Tarchala, Phone: 209-245-6921, Fax: 209-245-6923, E-mail: amadorfair@volcano.net

12-19 9th Annual Commander SAAZ Interplanetary Homebrew Blastoff! Melbourne, FL. **AHA SCP.** You don't have to be a rocket scientist to brew great beer, but it helps! The 9th annual Commander SAAZ Interplanetary Homebrew Blastoff is open to all homebrewers, and all 28 categories will be accepted, judged and awarded. Meads/ciders will have a best of show award separate from the beers. Standard bottle rules apply—send 3 bottles per entry. Entry Fee: \$6. Make checks payable to SAAZ. Ship entries to: Bob Bennett, 2215 New York St., Melbourne, FL 32904-6225. Forms will be available at the SAAZ Web site. Last year we had 246 entries from 9 different states. Please help take this year's competition past the 300 entry mark and into orbit! Contact: Steve Mitchell, E-mail: samitchell@cfl.rr.com, Web: www.saaaz.org/

19 Ohio State Fair Homebrew Competition. Columbus, OH. **AHA SCP.** Sponsored by SODZ, this event is open to all amateur homebrewers in Ohio. Entry Deadline: 7/14-7/18. Entry forms & fees must be postmarked by 6/20. Fee: \$5. Contact: Brett Chance, Phone: 614-644-4126, Fax: 614-771-1536, E-mail: b.chance@expo.state.oh.us, Web: www.ohiostatefair.com

20 Lunar Rendezbrew. Seabrook, TX. **BJCP SCP.** Contact: John Schmalz, Phone: 832-615-3305, E-mail: beerjohn@houston.rr.com, Web: www.geocities.com/mashtronauts/

26 4th Annual Mammoth Brewing Co Homebrew Competition. Capistrano Beach, CA. **AHA SCP.** 4th Annual Mammoth Brewing Co. Homebrew Contest in conjunction with the 8th Annual Mammoth Festival of Beers and Bluesapalooza. Entry Deadline: 7/18, 5 p.m. Winners notified 8/2 at Mammoth Festival of Beers. Fee: \$6. Contact: Rod Ambrose, Phone: 949-493-7808, Fax: 949-493-7808, E-mail: rodambrose1@cox.net, Web: www.softbrew.com/mbchbc

AUGUST

1-2 NY State Fair 4th Annual Homebrew Competition. Syracuse, NY. **AHA SCP.** A statewide homebrew competition with an awards ceremony to take place at the NY State Fair. All New York state residents are invited to participate. Sponsored by the Salt City Brew Club. Entry Deadline: 7/11-7/25. Fees: \$8 first entry, \$5 add. Awards Ceremony: 8/25, noon at the Cole Muffler Court Pavilion. Contact: Peter M. Garofalo, Phone: 315-487-7711 ext. 1337, E-mail: pgarofa1@twcny.rr.com, Web: www.nysfair.org

AMERICAN HOMEBREWERS ASSOCIATION
• KUDOS •
SANCTIONED COMPETITION PROGRAM

JUNE 2001

E'velle Triple Threat, 53 entries — **Keith Curtachio of Buffalo, NY.**

DECEMBER 2002

UNYHA 25th Annual/14th Empire State Open, 89 entries — **Ric Cunningham of Wheatfield, NY.**

FEBRUARY 2003

America's Finest City Homebrew Competition 2003, 227 entries — **Les Overman of San Diego, CA.**
Feb Fest 2003 Homebrew Competition, 68 entries — **Scott Laskey of Vernon Hills, IL.**
KCBM 20th Annual, 455 entries — **Ed Vandegrift of Lee's Summit, MO.**
War of the Worts VIII, 190 entries — **Keith Sequine of Woodbridge, NJ.**

MARCH 2003

8th Annual Hurricane Blowoff, 196 entries — **Joe Hughes of Jupiter, FL.**
8th Annual Kona Brewers Festival 2003, 123 entries — **Bill Brooks & Jud Robison of Kailua, HI.**
AHA TechTalk Competition, 36 entries — **Rob Beck of Kansas City, MO**
Bluff City Brewers 15th Annual Homebrew Extravaganza, 233 entries — **Darren Baicum of Ardmore, TN.**
Central Iowa Challenge, 30 entries — **Bill Van Zante of Urbandale, IA.**
Iowa Brewers Union Open 2003, 185 entries — **Steve Fletty of Falcon Heights, MO.**
March Mashness, 81 entries — **Arlin Karger of Moorhead, MN.**
Niagara Big Beers, 23 entries — **Ed D'Anna of Niagara Falls, NY.**
Shamrock Open 2003, 156 entries — **Jim Brewer of Cary, NC.**

APRIL 2003

11th Annual Dominion Cup, 99 entries — **Gary Cathay of Charlotte, NC.**
AHA Brown Ale Club-Only Competition, 54 entries — **Ray Lewis of Livonia, NY.**
Snow Goose Break-Up Competition, 22 entries — **Keith Howard of Anchorage, AK.**

MAY 2003

Upper Mississippi Mash-Out — **Ronald Lockhart of St. Paul, MN.**

2 FOAM Cup 2003. Bartlesville, OK. AHA SCP. The Fellowship of Oklahoma Alemakers announce the 2003 FOAM Cup Homebrew Competition for all BJCP Categories (including Cider and Mead) in Tulsa, OK. (A qualifier for the High Plains Homebrewer of the Year award!) Fee: \$6. Contact: Robert Gulley, Phone: 918-925-6409, E-mail: gullywsh@juno.com, Web: www.alemakers.com

2 Montgomery County Agricultural 8th Annual Homebrew Competition. Gaithersburg, MD. AHA SCP. Be a part of the 55th annual Montgomery County Agricultural Fair. Now in its 8th year, the annual Homebrew Competition is AHA and BJCP sanctioned and is open to all brewers worldwide! Fee: \$5. Contact: Pat & Bill Lawrence, Phone: 301-963-9314, E-mail: billy@erols.com, Web: g_a_b_s.tripod.com

2 AHA's Mead Day. In your backyard. Brew mead again or for the very first time, with the AHA! Contact: Gary Glass, Phone: 303-447-0816 x 121; 888-U-CAN-BREW x 121, Fax: 303-447-2825, E-mail: gary@aob.org, Web: www.beertown.org

2 European Pale Lager AHA Club-Only Competition. Denver, CO. AHA SCP. Hosted by Pacific Gravity of Los Angeles, this competition is open to all AHA registered clubs. One entry per club is allowed. Entry Deadline: 7/25. Fee: \$5. Make all checks payable to the AHA. Local Contact: Tom Gardner, 303-863-0209, tomagardner@cs.com AHA Contact: Gary Glass, Phone: 303-447-0816 x 121, Fax: 303-447-2825, E-mail: gary@aob.org, Web: www.beertown.org/homebrewing/club.html

2-23 Michigan State Fair Homebrew Competition. Westland, MI. AHA SCP. The Michigan State Fair Homebrew Competition is the largest competition specifically for Michigan made homebrew. Sponsored by: Ann Arbor Brewer's Guild. Entry Deadline: 7/12-7/27. Contact: Jim Suchy, Phone: 734-622-4582, E-mail: msfhomebrew@hotmail.com, Web: http://hbd.org/michigan

9 Oregon State Fair Homebrew Beer and Soda Competition. Salem, OR. AHA SCP. L B Day Amphitheatre, State Fairgrounds. Fee: \$6. Contact: Dave Wilson, Phone: 503-485-3895, E-mail: cigar@usaf.org, Web: www.oregonstatefair.org

9 Mt. Brewer Open-Homebrew Competition. Huntington, WV. AHA SCP. Sponsored by: Greater Huntington Homebrewers Association and the Huntington Museum of Arts. All BJCP styles, meads and ciders will be judged. Entry Deadline: 7/20-8/2. Fee: \$5. Awards Ceremony: 8/9. Contact: Dave Zalewski/Huntington Museum of Arts, Phone: 740-886-8828, Fax: 606-921-6565, E-mail: djzalewski@mapllc.com, Web: www.hbd.org/ghha/

10 Kentucky State Fair. Louisville, KY. AHA SCP. The Homebrew Department of the Kentucky State Fair invites you to enter our competition. We judge all of the official homebrew categories including cider/perry and mead. You must submit a State Fair entry form as well as the AHA entry form. State Fair Entry form due: July 1. Beer Entries due: August 9. There is no entry fee if you submit the State Fair form on time. State Fair entry information: www.kystatefair.org/ or Entry Department, P.O. Box 37130, Louisville, KY 40233-7130, 502-367-5190. Contact: Bob Reed, Phone: 502-222-0090, E-mail: tobias@igloo.com, Web: www.lagersclub.com

16 Western Washington Fair Amateur Beer Competition. Puyallup, WA. AHA SCP. Sponsored by: Western Washington Fair. Entry Deadline: 8/16. Awards Ceremony: 8/24. Fee: \$4. Contact: Grace Nilsson, Phone: 253-841-5017, Web: www.thefair.com

SEPTEMBER

22-27 2003 Mid South Fair. Cordova, TN. AHA SCP. Free! That's right, the Mid South Fair has never charged an entry fee and we have cash prizes! Also you can enter all sub-categories. Entry Deadline: 9/7-9/15. Contact: Jim Gosney, Phone: 901-354-1087, E-mail: jgosney@mid-south.rr.com, Web: www.memphisbrews.com

27 Pacific Brewer's Cup. Los Angeles, CA. AHA SCP. The Strand Brewer's Club, Pacific Gravity, and The Long Beach Homebrewers present the 7th annual Pacific Brewer's Cup. Judging will be at the Four Points Sheraton LAX. PBC 2003 is open to all BJCP styles including Mead and Cider. Sponsored by Strand Brewers Club. Entry Deadline: 9/2-9/19. Fees: \$6. Awards Ceremony: 9/27. Contact: James Hilbing, Phone: 310-798-0911, E-mail: james@hilbing.net, Web: www.strandbrewers.org/pbc/

OCTOBER

1 2003 Winking Lizard Tavern Homebrew Competition. Cleveland, OH. Competition limited to: Irish Red Ale, American Cream Ale and Oatmeal Stout. 1st, 2nd, 3rd awarded in each style. Best of Show winner will assist Great Lakes Brewing Co. in brewing their recipe and the beer will be served at all Winking Lizard Tavern locations in January 2004. Sponsored by: RT 82 Homebrewers Association. Entry Deadline: 9/1-9/30. Fee: \$5. Contact: Jim Leverenz, E-mail: 800-543-3697, Web: www.leemors.com/wlhbc.html

11 2003 OkTOSOfest Challenge. Denver, CO. The first annual OkTOSOfest, "a celebration of homebrew and mayhem" challenges you to enter your finest in the 2003 OkTOSOfest Challenge. This competition is open to Category 9 beers only (Oktoberfest and Vienna Lager). Prizes will be awarded for the top 3 beers and quality feedback from BJCP judges guaranteed. Entry Deadline: 10/3. Fee: \$6 for 1st entry; \$4 for add. Contact: Aaron Toso, Phone: 303-292-1524, E-mail: psy_dog@hotmail.com

11 2003 Name That Beer Championship (NTBC). Richmond, VA. Greater Richmond Convention Center. The NTBC is open to competitors 21 years and older anywhere in the U.S. and abroad. Prizes for 1st, 2nd and 3rd place. Contact: Alex, Phone: 804-426-6976, Web: www.namethatbeer.com

11 KCRF Homebrew Comp. Bonner Springs, KS. BJCP SCP. Contact: R. Clements, Phone: 816-531-6977, E-mail: sales@kcrenfest.com

25 Queen of Beer Women's Homebrew Competition. Placerville, PA. BJCP SCP. Contact: Beth Zangari, Phone: 530-621-5946 (day), 530-626-7733 (eve), E-mail: zangari1@yahoo.com

NOVEMBER

1 Teach A Friend To Homebrew Day. In your brewhouse. Recruit new fans to the joys of homebrewing! Invite your non-brewing friends over for a lesson at your house. Contact: Gary Glass, Phone: 303-447-0816 x 121; 888-U-CAN-BREW x 121, Fax: 303-447-2825, E-mail: gary@aob.org, Web: www.beertown.org

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<input type="checkbox"/> Joint AHA/IBS Individual Membership	□ \$170	N/A

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A large, vibrant American flag serves as the background for the entire page. It is positioned diagonally, with the stars in the upper left corner and the stripes extending towards the bottom right.

**THE RESULTS
ARE IN!**



**ZYMURGY'S BEST COMMERCIAL
BEERS IN AMERICA SURVEY**

BY RAY DANIELS

NOT SO LONG AGO, IN OUR JANUARY/FEBRUARY 2003 ISSUE, WE ASKED OUR READERS TO VOTE FOR THEIR FAVORITE BEERS. AND THEY DID! IN TOTAL WE RECEIVED NEARLY 900 VOTES FOR ALMOST 500 DIFFERENT BRANDS FROM MORE THAN 50 BREWERIES. THE TOP BRANDS INCLUDED SOME EASILY PREDICTED HOUSEHOLD NAMES BUT ALSO SOME SURPRISING REGIONAL CULT BEERS. IN THIS ISSUE, WE TELL YOU WHO THE WINNERS ARE AND LAY OUT THE RECIPES YOU CAN USE TO EMULATE MANY OF THESE TOP-QUALITY BREWS.

ABOUT THE VOTING

The premise of this exercise was that you, the *Zymurgy* reader, brew beer. Therefore, you not only drink beer on a regular basis, you also know how it's made and what's good and bad in beer flavor. Furthermore, since past surveys indicate that most of you drink at least one six-pack of commercial beer each week, you keep an eye on what the commercial producers are doing and you know who's getting it right. Bottom line is that you know a thing or two about good beer and you monitor commercial beer production in the U.S.

So, with that as our working assumption, we asked you to vote for up to 20 of your favorite brands. This was an open question: you could pick any brand you wanted to include on your list. All we asked was that it be a beer you could purchase in America and that you vote for those beers that "deserve your undying devotion, the beers you would take with you for a year at the cabin, the beers you would feel lost and empty without, the beers that you wish you had made first so that you could ride their tasty coattails to fame and fortune."

And vote you did. We got e-mails and letters from all over the American beer universe. Some were carefully-researched and precisely-ranked lists of 20, complete with proper brand and brewery spellings. Others were scrawled sniper-shots: a single beer shouted into the electronic ether—perhaps while under the influence of that very beer. All in all, you told us what we wanted to know.

THE RESULTS

Thanks to the electronic submissions, tabulation wasn't too tough. An hour or two of cutting and pasting, transcription of the snail-mailed responses and a little editing to work off the rough edges caused by creative spelling. This yielded a spreadsheet of beer longing from America's brewing elite, a list of those beers so coveted and revered that they deserve high praise and adulation.

The first cut at the data was a simple ranking by total votes. Each time a beer appeared on anyone's list, it got a vote. Any ranking that voters provided didn't matter, nor did the number of beers on anyone's list play into the thinking. This yielded the Top Ranked Beers as shown in Table 1.

Not surprisingly, the first four beers on this list are familiar names. More remarkable was the fact that they all came from just two breweries: Anchor Brewing Company and Sierra Nevada Brewing Company. Indeed, these two brewers accounted for six of the top 12 beers overall in the survey, showing that they have not only quality but depth.

These two California breweries, pioneers in the American craft beer revolution, run neck-and-neck through the top rankings with a surprising mirror image effect. In positions one and two, we have their flagship products: Sierra Nevada Pale Ale takes first while Anchor Steam comes in second. The next two positions get both breweries' IPA-like entries with Sierra Nevada Celebration in third and Anchor's Liberty Ale in fourth. When next we see the pair, it is with barleywines at positions 8 and 9. Once again, Sierra Nevada leads with Bigfoot and Anchor follows immediately behind with Old Foghorn.

Despite the dominance of this duo, six other beers managed to squeeze into the top 12 and it didn't require national distribution

and household name-recognition to get there. Five of the remaining six top-12 beers are regional favorites with surprising reach.

Leading the way in fifth place was Stone Brewing Company's Arrogant Bastard. Homebrewers are nothing if not hopheads



and "the Bastard" has certainly become a poster child for that cause. Even in a West Coast marketplace well populated with over-the-top hopping, this beer has laid claim to being extreme. Combine that with an in-your-face marketing style, and those who love humulone cannot resist developing a strong affection for the affliction flavor of this brew.

Next up at number six was Alaskan Smoked Porter. Unlike all of the others above it, this is a specialty beer with limited distribution. Let's face it, not everyone likes smoked beers. But if you do, then this is the one you long for, the one you most yearn to have in your cellar and the one that you will move heaven and earth to get a six-pack or case of each year. Year after year, this beer has medaled at the Great American Beer Festival and at other competitions around the world as well. As a result of this renown and the fact that it is released in only limited quantities each year, it attracts a devoted following.

At number seven on our list we find a beer that embodies several firsts. For starters, it is the first Belgian-style beer on the list, and also the first to deviate from what has so far been a strong West Coast leaning. Brewery Ommegang occupies New York farmland that once grew hops commercially and lays claim to being the first farmstead brewery built in America in the past century. In a very Belgian way, Ommegang Abbey Ale offers a unique flavor profile that includes the fruity signature of

the European lowlands along with complex malt and hop flavors. No wonder it attracts the admiration of homebrewers who these days often specialize in making their own Belgian-style brews.

Rounding out the top 12 beers (tied for ninth place with Anchor Old Foghorn), we find an interesting and totally unrelated trio of beers. For starters, we have Samuel Adams Boston Lager. Perhaps more than any other beer, this product has introduced American drinkers to the flavorful alternatives available from craft brewed suds. For homebrewers, it is a reliable standby—a good beer that is often found where nothing else worth drinking appears. Furthermore, it is consistent, reliable. Perhaps more than any other craft brewery in America, the

SAMUEL ADAMS

Boston Brewing Company has worked to make sure the product that reached the consumer was of high quality on a consistent basis. Homebrewers may find it hard to relate to the magnitude of that accomplishment in brewing terms, but they nonetheless appreciate the beer itself.

The New Belgium Brewing Company makes its first appearance on our list in the ninth place tie with Fat Tire Ale. New Belgium was established specifically to brew Belgian-style beers and Fat Tire has been positioned as the flagship beer designed to have wide appeal with consumers. While some homebrewers may be more interested in the brewery's more flavorful products that appear further down the list, Fat Tire is widely distributed in the mountain and western states and thus garners the most attention.



Rounding out the tie for ninth place—and our top 12 beers overall—we find another regional favorite in the Great Lakes Brewing Company's Edmund Fitzgerald Porter. This is the first year-round black beer on our list and it edges out the West Coast competition for top honors in this stylistic range. While Great Lakes has grown deservedly well-known for good beers including Burning River Pale Ale and Dortmunder Gold, it is interesting that their



TABLE 1 : TOP RANKED BEERS ("T" INDICATES A TIE.)

Place	Beer	Place	Beer
1	Sierra Nevada Pale Ale	35T	Burning River Pale Ale (Great Lakes)
2	Anchor Steam	35T	Dortmunder Gold (Great Lakes)
3	Sierra Nevada Celebration	35T	Guinness Stout
4	Anchor Liberty Ale	35T	Red Seal Ale (North Coast)
5	Stone Arrogant Bastard Ale	35T	Hennepin (Ommegang)
6	Alaskan Smoked Porter	35T	Pilsner Urquell
7	Ommegang Abbey Ale	35T	Sprecher Black Bavarian
8	Sierra Nevada Bigfoot	46T	Bell's Oberon (Kalamazoo)
9T	Anchor Old Foghorn	46T	Brooklyn East India Pale Ale
9T	Edmund Fitzgerald Porter (Great Lakes)	46T	Deschutes Black Butte Porter
9T	Fat Tire Ale (New Belgium)	46T	Dogfish Head Immortal Ale
9T	Samuel Adams Boston Lager	46T	Dogfish Head Indian Brown Ale
13T	Anchor Porter	46T	Flying Fish ESB
13T	Old Rasputin Russian Imperial Stout (North Coast)	46T	Flying Fish Grand Cru
13T	Redhook ESB	46T	Fuller's London Pride
13T	Stone Ruination	46T	Honkers Ale (Goose Island)
17	Rogue Dead Guy Ale	46T	Hex Nut Brown Ale (Goose Island)
18T	Alaskan Amber	46T	Elliot Ness (Great Lakes)
18T	Hop Ottin' IPA (Anderson Valley)	46T	Guinness Extra Stout
18T	Bell's Expedition Stout (Kalamazoo)	46T	Hair of the Dog Golden Rose
18T	Brooklyn Brown Ale	46T	Ipswich Ale (Mercury)
18T	Dogfish Head 90 Minute IPA	46T	Abbey Ale (New Belgium)
18T	Hair of the Dog Adam	46T	Brussels Style Black Ale (New Belgium)
18T	New Glarus Belgian Red	46T	Blue Paddle Pils (New Belgium)
18T	Rogue Shakespeare Stout	46T	New Glarus Raspberry Tart
18T	Victory Hop Devil	46T	Old Stock Ale (North Coast)
27T	Bell's Two Hearted Ale (Kalamazoo)	46T	Orval
27T	Bridgeport IPA	46T	Pike Pale Ale
27T	Mirror Pond Pale Ale (Deschutes)	46T	Rogue Brutal Bitter
27T	Obsidian Stout (Deschutes)	46T	Rogue Imperial IPA
27T	Raison d'Etre (Dogfish Head)	46T	St. Rogue Red
27T	Full Sail Amber Ale	46T	Younger's Special Bitter (Rogue)
27T	Samuel Adams Double Bock	46T	Boston Stock Ale (Boston)
27T	Victory Prima Pils	46T	Old Fezziwig (Boston)
35T	Brooklyn Black Chocolate Stout	46T	Sierra Nevada Stout
77T	Celis White	46T	Alpha King (Three Floyds)
35T	Chimay Red	46T	La Fin Du Monde (Unibroue)
35T	Duvel	46T	Trois Pistoles (Unibroue)
35T	Fuller's ESB		

porter should win out over the pale beers of their line. Still, who can argue with the melodic, roasty complexity of the malt, the careful kiss of hops and the satisfying balance of this highly quaffable beer?

GREAT LAKES BREWING CO.

AMONG THE IMPORTS

While we didn't limit the voting to American-made beers, many took that to be our intent. Still others realized that "the best beers in America" could very well include imports sold here. As people contemplated their favorites, a few outstanding imports naturally came to mind, led by the Belgians. Topping this list were the Trappist ale Chimay, with the "red" being most often noted, followed closely by Duvel Moortgat's Duvel. The Trappist ale Orval fell lower in the list, rounding out the top Belgian imports. Each

of these is a classic much lauded in the beer press and much admired by beer drinkers worldwide. If you are not familiar with them already, then you certainly should be.

The only European brewer with two entries in the top 50 places was London's Fuller's with both London Pride and ESB making the grade. These beers have long served as prototypes for the English ale





TABLE 2: BREWERY RANKINGS

(“T” INDICATES A TIE.)

These rankings are based on total votes received by each brewery's beers.

Place	Brewery	Location
1	Sierra Nevada Brewing Co.	Chico, CA
2	Anchor Brewing Co.	San Francisco, CA
3	Rogue Ales	Newport, OR
4	Stone Brewing Co.	North San Diego, CA
5	Kalamazoo Brewing Co.	Kalamazoo, MI
6	Boston Beer Company	Boston, MA
7	Dogfish Head Brewing Co.	Rehoboth Beach, DE
T8	Great Lakes Brewing Co.	Cleveland, OH
T8	New Belgium Brewing Co.	Ft. Collins, CO
10	Victory Brewing Co.	Downington, PA
T11	Alaskan Brewing Co.	Juneau, AK
T11	Brewery Ommegang	Cooperstown, NY
13	North Coast Brewing Co.	Ft. Bragg, CA
14	Deschutes Brewing Co.	Bend, OR
15	New Glarus Brewing Co.	New Glarus, WI
T16	Brooklyn Brewing Co.	Brooklyn, NY
T16	Goose Island Brewing Co.	Chicago, IL
T18	Anderson Valley Brewing Co.	Boonville, CA
T18	Bridgeport Brewing Co.	Portland, OR
T18	Flying Fish	Cherry Hill, NJ
21	Unibroue	Chambly, Quebec
22	Hair of the Dog	Portland, OR
T23	Bieres De Chimay	Baileux (Chimay), Belgium
T23	Redhook Ale Brewery, Inc.	Seattle, WA
T25	Capital Brewery	Middleton, WI
T25	Fuller, Smith and Turner PLC	London, England
T25	Guinness	Dublin, Ireland
T25	Stoudt's Brewing Co.	Adamstown, PA
T29	Full Sail	Hood River, OR
T29	Leinenkugel	Chippewa Falls, WI
T29	Pike	Seattle, WA
T29	Sprecher	Milwaukee, WI
T33	Celis	Austin, TX
T33	Lakefront	Milwaukee, WI
T33	Summit	St. Paul, MN
T33	Three Floyds	Munster, IN
T33	Two Brothers	Warrenville, IL
T38	Allagash	Portland, ME
T38	Avery	Boulder, CO
T38	Bear Republic	Healdsburg, CA
T38	Cantillon	Brussels, Belgium
T38	Duvel	Antwerp, Belgium
T38	Long Trail	Bridgewater Corners, VT
T38	Paulaner	Munich, Germany
T38	Pilsner Urquell	Plzen, Czech Republic
T38	Samuel Smith's	North Yorkshire, England
T47	Angelic	Madison, WI
T47	Arcadia	Battle Creek, MI
T47	Orval	Orval, Belgium
T47	Pete's	San Antonio, WA
T47	Young's	London, England
T47	Yuengling	Pottsville, PA

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styles of best bitter and extra-special bitter and they are often regarded as the best of their type in the U.K. Not surprisingly, Ireland's Guinness Stout made the list as well. Voters

gave various names to their Guinness

votes, some GUINNESS BASS IMPORT COMPANY staying with the simple "Guinness Stout" while others specified "Guinness Extra Stout"—the name given to the stronger foreign-style stout product. We took them at

their word and divided the votes accordingly. In general, it would be

impossible to overstate the quality, consistency and fame of Guinness.

Pilsner Urquell was the only foreign lager to make our list. Hailing from the city that gives the style its name and long famous as the original of the genre, "PU" would natu-



GUINNESS

GUINNESS BASS IMPORT COMPANY

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TABLE 3: SPIRIT OF HOMEBREWING RANK

This ranking is based on total number of votes received divided by annual production in barrels.

Rank	Brewery	Location
1	Brewery Ommegang	Cooperstown, NY
2	Dogfish Head Brewing Co.	Rehoboth Beach, DE
3	Victory Brewing Co.	Downingtown, PA
4	Stone Brewing Co.	North San Diego, CA
5	Flying Fish Brewing Co.	Cherry Hill, NJ
6	New Glarus Brewing Co.	New Glarus, WI
7	Rogue Ales	Newport, OR
8	Great Lakes Brewing Co.	Cleveland, OH
9	North Coast Brewing Co.	Ft. Bragg, CA
10	Kalamazoo Brewing Co.	Kalamazoo, MI

rally be included in any list of world-class beers. (Indeed, the May-June 2003 issue of *Zymurgy* featured a story on this brewery and its beer.) Perhaps more surprising was the fact that no other lager, and indeed, no German beer at all, made our list of top brands. America's craft beer drinkers apparently have a decided preference for the ale side of the aisle.

Coming back to North America to complete our list of top foreign entries, we find two Belgian-style beers from Canadian brewer Unibroue in Chambly, Quebec. Their entries include La Fin du Monde ("The End of the World"), an Abbey-style triple, and Trois Pistoles, a dark ale in a similar vein. Both clock in at 9-percent alcohol by volume, and both come highly recommended for lovers of Belgian-style beer.

THE TOP BREWERS

Not content simply to list the best beers, we had to carry the analysis further to look at the top brewers. Here, one can cut the data in many ways and we have several insights to share with you.

The most obvious approach was to tally the total number of votes garnered by each brewery (See Table 2). This listing starts off sounding like a replay of the top beers list, with Sierra Nevada and Anchor taking spots one

and two, but some surprising upstarts sneak in after that.

In the third spot, we find Rogue Ales, the Oregon brewer who seems to blanket America's specialty beer market with an endless selection of beers. (Expect an article devoted to this brewer's beers in the Sept/Oct issue of *Zymurgy*.) Their strategy has long

led them to sell beer anywhere that drinkers wanted it while also cranking out a range of different brands that would make any homebrewer proud. While number three in total votes, they are number one as makers of the most diverse high-quality portfolio of beers in America.

The fourth spot goes to Stone Brewing Co., makers of Arrogant Bastard and Ruination. Although younger, less widely distributed and with fewer brands than their neighbors on this list, they are buoyed by an ardent cadre of dedicated supporters.

Nipping at Rogue's heels in the diversity column is another surprise in the total vote rankings. Kalamazoo Brewing Company slides in at number five overall ahead of Boston Beer. Kalamazoo makes the sometimes quirky "Bell's" beers including Expedition Stout, Two-Hearted Ale and Oberon. Like Rogue, they achieve a high rank in the "total votes" count because they market such a broad range of beers. In total, 11



ROGUE



TABLE 4: TOP IMPORT BEERS
("T" INDICATES A TIE)

Overall Place	Beer
35T	Chimay Red
35T	Duvel
35T	Fuller's ESB
35T	Guinness Stout
35T	Pilsner Urquell
46T	Fuller's London Pride
46T	Guinness Extra Stout
46T	Orval
46T	La Fin Du Monde (Unibroue)
46T	Trois Pistoles (Unibroue)

Bell's beers made our overall tally, second only to Rogue with 12.

In seventh place in the total votes category, we find a brewery that clearly exemplifies the spirit of homebrewing, the Dogfish Head Craft Brewery of Rehoboth Beach, Del. Brewer Sam Calagione has captured the attention of creative brew-



STONE
BREWING CO.
NORTH COUNTY SAN DIEGO



TOP RANKED PORTFOLIO OF BRANDS

Anchor Brewing Co.:

Three of their four core brands ranked in the top 10 with the fourth falling in the top 20 brands.

Sierra Nevada:

Ran neck and neck with Anchor through the first three brands, but their fourth didn't place until 46th.



BIGGEST PORTFOLIO OF QUALITY BRANDS

Rogue Ales:

With a total of 12 brands getting votes in this survey, Rogue clearly offers the most diverse and widely appreciated portfolio of beers. Kalamazoo Brewing Co. was a close second with 11 entries.

ers everywhere with products like his 90-Minute IPA, Midas Touch Golden Elixir and World Wide Stout. Sometimes brewing to the highest alcohol levels seen in beer, his formulations may include ingredients like Muscat grapes and saffron as well as continuous additions of hops throughout the boil.

Great Lakes and New Belgium place eighth and ninth in the top breweries list and Victory Brewing Company of Downingtown, Pa. rounds out the top 10. Victory makes traditional styles



with a zeal for hops, such as HopDevil ale and Prima Pils, as

well as other great beers like the Belgian-style trippel called Golden Monkey. Founded in 1996, they have enjoyed a great reputation among the beer connoisseurs of the mid-Atlantic region. From their performance in this survey, it appears their brews are gaining a much-deserved reputation for quality and flavor.

Our final look at the breweries indulged a sort of "small is beautiful" bent. We are homebrewers after all and we are allowed to think that no mega-brewery (or even micro-brewery) could make beer so good as that made by hand in a small space. To gauge this, we divided the number of total votes each brewery received by their total production for 2001 as reported to the Association of Brewers. Not surprisingly, it yielded the smaller breweries among those we have seen already: Brewery Ommegang, Dogfish Head, Victory, Stone and a new entry in New Jersey's Flying Fish Brewing Co. See Table 3 for the full list.

WRAP-UP

A survey like this gives lots of opportunities to wax poetic about the great beers being made and consumed in America today. More and more, I find visitors from Europe to be stunned by the depth and breadth of our beer culture. As homebrewers, we can certainly find a lot to appreciate and a lot to emulate as well.

Throughout the rest of this issue, we take the time to look closely at the best and most interesting beers that emerged from this poll. In nearly every case, we pro-

vide you with a recipe that you can use to make your own version of the successful commercial beer. Of course, once you've made your own clone you'll wind up doing what all good brewers do, comparing it—sometimes endlessly—to the original. In the end, whether you create a killer knock-off or a creative alternative doesn't really matter. It is the brewing—and of course the tasting—that provide the fun and the satisfaction of homebrewing.

Ray Daniels drank his first American craft beer in a Washington D.C. hotel bar sometime around 1987. Homebrewing followed not long after that and since that time his life has been one headlong tumble into obsession with brewing as well as beer. These days he edits *Zymurgy* and *The New Brewer* while running the book publishing activities of the Association of Brewers. In his spare time, he organizes the Real Ale Festival in Chicago each winter.



SIERRA NEVADA PALE ALE CLONE



Target O.G.: 1.052 (13° P)

Target T.G.: 1.011 (2.8° P)

Expected ABV: 5.5%

Target IBUs: 38

ALL-GRAIN WORT PRODUCTION

11.0 lb (5 kg) American two row malt

1.0 lb(0.45 kg) Crystal malt (30-60° L)

Mash with 4 gallons of water to achieve 149° F (65° C). Rest for one hour. Sparge with 4 to 5 gallons (15-19 L) of water to collect 5.5 to 6.5 gallons (21-25 L) of wort. (Assumptions: 5.5 gallons at end of boil, 70% efficiency.)

EXTRACT PLUS SPECIALTY GRAIN WORT PRODUCTION

6.6 lb (3 kg) Malt extract syrup (light or pale) or 5.5 lb (2.5 kg) Dry malt extract (light or pale)

1.0lb (0.45 kg) Crystal malt (30-60° L)

Put crushed crystal malt in grain bag into pot with cold water. Heat pot, stirring every few minutes. Just as the pot begins to simmer, remove the grain bag and let drain into the pot. Add the malt extract and stir until dissolved.

THE BOIL

As soon as you begin heating the wort, add the Perle hops as follows: 7 alpha acid units of pellets or 8.5 alpha acid units of whole hops. (7 alpha acid units = 1 ounce x 7% alpha acid content or 1.25 ounces x 5.8% alpha acid content hops).

- 15 minutes before end of boil, add 0.5 oz (14 g) of Cascade hops
- 5 minutes before end of boil, add 0.75 oz (21 g) of Cascade hops

At end of boil, chill, aerate and pitch with American Ale Yeast (Wyeast 1056 or similar).

FERMENTATION

At the end of primary fermentation, add 0.5 to 1 ounce (14-28 g) whole Cascade hops for secondary fermentation.

After 7-10 days in secondary, package, condition and enjoy!

—Ray Daniels

ALASKAN SMOKED PORTER



Each year, the Alaskan Brewing Co. does a little "chainsaw" brewing: they cut up locally grown alder wood and use it to smoke malt for their rare and much sought-after Alaskan Smoked Porter. Winner of numerous Great American Beer Festival medals, this rich porter harkens back to a day when smoke infused the flavor of nearly all beers. The already rich malt base is enhanced by the distinctive smokiness to give a complex beer that will evolve and change as it ages. If you don't have a batch stashed away in your barchives, it is clearly time to brew one up.

While you can only recreate the flavor of Alaskan's product using alder and their own commercial smoker, great wood-smoked malts are available to homebrewers from Weyermann maltings in Germany and distributed by many homebrew retailers. For your first batch, we recommend this source of smoked malt, but after that, you may want to take a shot at smoking your own.

ALASKAN SMOKED PORTER CLONE (6)

Original Gravity: 1.065

Alcohol: 6.1% abv

Bitterness: 45 IBU

Color: 92.2 SRM

ALL-GRAIN WORT PRODUCTION

8.0 lb (3.6 kg) North American 2-row malt

2.0 lb (0.9 kg) Smoked Malt (Weyermann or home smoked)

1.0 lb (0.45 kg) Crystal malt (medium dark)

0.5 lb (226 g) Chocolate malt

0.5 lb (226 g) Black Patent malt

Mash at 152° F (67° C) and collect 5.5 to 6 gallons (21-23 L) of runoff.

EXTRACT PLUS MINI-MASH WORT PRODUCTION

Substitute 6 lb of light malt extract syrup in the kettle for the 2-row malt. Conduct a mini-mash with the remaining 4 pounds (1.8 kg) of grain at the temperature indicated above.

WORT PROCESSING

0.75 oz (21 g) Chinook hops (11% alpha acid) for 60 minutes

0.75 oz (21 g) Goldings hops (4% alpha acid) for 15 minutes (6 BU)

Boil for 75 to 90 minutes, adding the first hops so that they boil for 60 minutes. Pitch with an ample starter of Chico Ale (Wyeast American Ale or White Labs California Ale) yeast or a common British strain such as London Ale yeast. Ferment at 65-70° F (18-21° C).

VICTORY HOP DEVIL



More than just a clone, this is actually the homebrew predecessor to the wonderfully hoppy beer now known as Victory's Hop Devil ale. The recipe comes to us from the developer of the beer, Jim Busch.

Busch took up the homebrewing hobby in 1988 after he received a True Brew American Dark kit as a Christmas present. He switched to all-grain brewing within six months, and in 1992 custom-fabricated a 1-barrel brew-house in a shed in his mother's backyard. In 1995, he brewed Espirit de Boire, a Belgian-style strong spiced ale that was given out as the commemorative brew at the American Homebrewers Association convention in Baltimore, Md. That same year, Busch turned pro: he's a member of the board of directors for Victory Brewing Co. in Downingtown, Pa., and also does test brews of new recipes. When he's not brewing, Jim is a NASA contractor who designs satellite ground systems. The following recipe, which Jim first brewed in 1990, became the basis for Victory's HopDevil IPA. It's won numerous awards in competitions organized by the Washington, D.C. area club Brewers United for Real Potables (BURP).

VICTORY HOP DEVIL CLONE (18 T)

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

Original specific gravity: 1.055

Final specific gravity: 1.012

ALL-GRAIN WORT PRODUCTION

8.0 lb (3.6 kg) pilsener malt

0.5 lb (0.23 kg) cara-viennese malt

0.25 lb (0.11 kg) cara-munich malt

0.25 lb (0.11 kg) Munich malt

2.0 oz (57 g) Centennial hops (about 10% AA)

2.5 oz (71.3 g) Cascade hops (about 6% AA)

0.5 tsp gypsum (useful for soft water supplies)

Wyeast 1056

Boiling time: 90 minutes

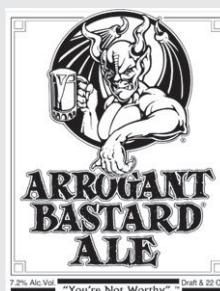
Primary fermentation: 3-5 days at 65° F (18° C)

Secondary fermentation: about 7 days at 65° F (18° C)

BREWER'S SPECIFICS

Combine 3 gallons of water heated to 155° F (68° C) with the malt and gypsum. Hold at 144-146° F (62-63° C) for 15 minutes, then boost to 156° F (69° C) for another 30 minutes. Boost to 170° F (82° C) and lauter. Boil for 90 minutes. Add 1.5 oz (43 g) of Centennial hops 30 minutes into the boil, and another 0.5 oz (14.3 g) of Centennials 60 minutes into the boil. Add 1 oz (28.5 g) Cascade hops five minutes before the end of the boil, and another 1 oz (28.5 g) of Cascades at knockout. Chill, oxygenate well and pitch 1 qt of yeast starter. Ferment to completion, and add 0.5 oz (14.3 g) of Cascade hops for dry-hopping, or keg and add hop bag to keg. Carbonate to 2.6 volumes, or serve as cask ale at 1.3 volumes.

A BASTARD OF A BEER



Attention Unworthy! This beer is not for the tentative, wimpy or weak. It is also not for fizzy-yellow-beer-swilling ingrates such as your ill-informed brother-in-law, your pseudo-trendy boss or that jerk, know-it-all neighbor of yours. THEY ARE NOT WORTHY! If you arrogant bastards want to attempt nirvana and brew a beer that is truly worthy, you will have to be prepared to drink the beer yourself because your lily-livered friends will most assuredly not be able to handle it without incurring permanent psychological modification.

Now know this! The arrogant bastards at Stone Brewing Co are completely unwilling to divulge any information about the recipe for this beer. They won't tell you what's in it or how to brew it. When asked about the malt bill, they replied "lots of it." When asked about the hops, they said, "Yeah, put quite a bit of those in too." When questioned further, they said "You're **Zymurgy**. You figure it out." So, we did—with two phone calls, one e-mail and five minutes on the Internet. Just to be nice we sent this recipe to Stone, but they remained tight lipped on the subject. Not even a wink or a nod. Bastards!

So, brew, drink and if you are lucky enough to get Arrogant Bastard Ale in your hometown, compare! And the next time you see that arrogant bastard Greg Koch tell him, "I'M WORTHY!"

—Ray Daniels

ARROGANT BASTARD ALE CLONE (5)

1.076 O.G. (18.5° P)
76 IBUs

light malt extract for the 2-row malt and steeping the dark crystal in two gallons of 152° F (67° C) water for 20 minutes.

ALL-GRAIN WORT PRODUCTION

13.5 lb (6.1 kg) Great Western 2-row malt
1.5 lb (0.68 kg) Dark Caramel or Crystal malt at about 150° L
Mash at 152° F (67° C) for 45 minutes and sparge with 170° F (77° C) water to collect about 6.25 gallons of wort.

WORT PROCESSING

1.0 oz Chinook pellet hops 10-12% AA (90 min) (55 BU)
0.5 oz Chinook pellet hops 10-12% AA (45 min) (21 BU)
0.75 oz Chinook hops 10-12% AA (steeped in hot wort after boil)
Pitch with an arrogantly large bolus of Chico ale yeast such as Wyeast American Ale or White Labs California Ale. Ferment at 65-70° F (18-21° C).

EXTRACT PLUS GRAIN WORT PRODUCTION

Stone Brewing Co says simply, "You can't get there from here." Still we believe a worthy attempt can be made by substituting 9 pounds (4 kg) of

AND REMEMBER: DO NOT SERVE IN THE PRESENCE OF THE UNWORTHY!

CELEBRATION ALE

Sierra Nevada's Celebration Ale is a hop-head's dream: swimming with hop flavor on a pleasant malt base, it will turn away the uninitiated, but thrill those with a taste for lupulin. Like many great beers, it is as simple as it is good. Here's our crack at an all-grain version with a well-tested extract recipe below.

CELEBRATION ALE CLONE (3)

ALL-GRAIN RECIPE

Recipe for 5 gallons
OG: 1.065 (16° P)
FG: 1.015 (3.9° P)
Assumes 75% brewhouse efficiency
IBUs: 54

10.0 lb (4.5 kg) North American 2-row malt
1.5 lb (0.68 kg) Crystal malt (25-40° L)
0.5 lb (227 g) Dextrin malt
Single temperature infusion mash at 154° F for 45-60 minutes.
0.75 oz (21 g) Chinook at 11% alpha acid (90 min)
0.75 oz (21 g) Cascade at 6% alpha acid (30 min)
0.25 oz (7 g) Cascade steeped at the end of the boil
0.25 oz (7 g) Centennial steeped at the end of the boil
0.25 oz (7 g) Cascade dry-hopped

0.25 oz (7 g) Centennial dry-hopped
Wyeast American Ale yeast or White Labs California Ale yeast

EXTRACT RECIPE

Developed by David Graham and contributed by Brew By You owner Bill Wible from his Web site: www.brewbyyou.net/recipes/
Bitterness: 54 IBU
Original Gravity: 1.060 (14.9° P)
Final Gravity: 1.016 (4° P)
Mash Efficiency: 40%

6.5 lb (3 kg) Laaglander Light Malt Extract
1.0 lb (0.45 kg) Briess CaraPils
2.0 oz (57 g) Chocolate Malt
0.5 lb (227 g) Crystal Malt (20)
1.5 oz (43 g) Chinook (11.8% AA, 60 min)
1.0 oz (28 g) Cascade (5.5% AA, 5 min)
1.0 oz (28 g) Cascade (5.5% AA, 5 min)
Steep grains in 1 gallon (3.8 L) water (minimum) at 158° F (70° C) for 30 minutes. Add dry malt extract and boil for one hour adding hops at times listed above. Cool wort and pitch with a starter of White Labs California Ale Yeast and ferment at 68° F (20° C). Best after aging one month in bottle.



It was Sunday, and, according to his custom on that day, McTeague took his dinner at two in the afternoon at the car conductors' coffee-joint on Polk Street. He had a thick gray soup; heavy, underdone meat, very hot, on a cold plate; two kinds of vegetables; and a sort of suet pudding, full of strong butter and sugar. On his way back to his office, one block above, he stopped at Joe Frenna's saloon and bought a pitcher of steam beer.

-McTeague: A Story of San Francisco, by Frank Norris



Anchor Brewing Company Sustains America's Brewing History

By Amahl Turczyn Scheppach

When Frank Norris wrote his historic novel of post-gold rush San Francisco in 1891, steam beer had gained a reputation as a working man's drink, and one which was not only uniquely American, but unique to the San Francisco Bay area. In the novel, McTeague, a down-on-his-luck dentist who liked taking long naps in his dentist chair after quaffing large quantities of beer, drank steam beer as opposed to the increasingly available bottled lager because it was one-third the price. It was a rustic, local specialty, originally produced for thirsty gold miners without the cooling methods used to produce true lager fermentation and storage. Temperatures rarely approached freezing, and the advent of refrigeration was still many years off. So brewers had to use what was available to them and trust their own ingenuity to make good beer.

From this modest beginning, a world classic was born, but it would not have survived long had it not been for the Anchor Brewery. Five years after Norris wrote of his character McTeague's love for steam beer, German brewer Ernst F. Baruth and his son-in-law, Otto Schinkel, Jr., purchased an old brewery on San Francisco's Pacific Avenue. The steam beer that Anchor Brewery produced had probably already been around since the mid-1800s, when the discovery of gold drew scores of hopeful prospectors, along with enterprising brewers to keep them refreshed after their toils. But supplying them with good quality beer in California, they were soon to learn, required skill, ingenuity and resourcefulness. Steam beer was nothing more than a clever compromise to meet their customers' demands.

To keep costs low, steam beer brewers probably relied heavily on local ingredients. Transportation of brewing ingredients was

always a limiting factor for brewers, so American hops—though not the most refined for beer brewing at the time—were probably favored over the more expensive imported varieties. California hops were shunned by traditional old world brewers

for their raw spiciness, but brewers of steam beer used them in abundance, likely lending their beer a refreshingly dry and uniquely spicy character, as well as fortifying the brew against infection. Likewise, barley grown in California was probably used, and

From this modest beginning, a world classic was born, but it would not have survived long had it not been for the Anchor Brewery.





Fritz Maytag rescued Anchor from bankruptcy in 1965 and took 10 years to turn a profit.



while adjuncts like corn and rice were being employed in some of the larger lager beer recipes of the East and Midwest, unsophisticated steam beer retained its defiantly all-barley grist. Mineral-rich San Francisco water, and widely available lager yeast—perhaps mutated over the years to adapt to the higher temperatures—were

Maytag worked to make Anchor Steam a consistently high-quality product, using the same traditional methods employed in Gold Rush times, but with modern sanitation, a lab, and in early 1969, packaging in bottles.

used. Early on, however, some resourceful steam beer brewer found that fermentation in shallow pans about two feet deep kept the wort cooler and produced a better-tasting beer.

The designation of "steam," now carefully guarded as a registered trademark of the Anchor Brewing Company, has more than one story behind it. Probably the most common was that since the beer was krausened quite generously with fresh wort to produce carbonation in the draft barrel, the intense pressure would most often have to be bled off by the barkeeper the day before serving. The foam and pressure would escape with such force, it resembled steam being blown from a boiler. Other accounts hold that the thick, white crest of a freshly-poured draught was the "head of steam" after which the beer was named. In any event, there is now only one steam beer in the world, and homebrewers or craft brewers seeking to produce their own version of this West Coast classic must humbly settle for the clunky designation of "California Common."

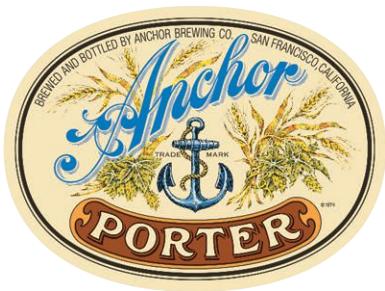
Beginning in 1906, a series of tragedies befell Anchor. Baruth died tragically, the brewery was consumed by fire following San Francisco's great earthquake that year, and in



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1907, as the brewery was being rebuilt, remaining owner Schinkel was run over by a street car and killed. German brewers Joseph Kraus and August Meyer, with the help of a liquor store owner named Henry Tietjen, were able to rescue Anchor and keep it going until Prohibition closed their doors in 1920. After 13 years without business, the brewery started up again, only to burn down again a year later. But Kraus chose to rebuild in a brick building, and this time, with the help of another brewer named Joe Allen, the brewery lasted until 1959.



As it happened in McTeague's time, popular, mass-market light lagers became the fashionable drink, eclipsing the quirky, inconsistent steam beer's sales to the point where Anchor was forced to shut down.

Anchor Steam™ Clone

Recipe courtesy of Marc Sedam

Recipe for 5 gallons (19 L)

Assumptions: 5.5 gallons at end of boil, 70% efficiency.

Original Gravity: 1.050 (12.3° P)

Final Gravity: 1.014 (3° P)

IBU: 38

All-Grain Wort Production

9.0 lb (4.1 kg) German pils malt

1.0 lb (0.45 kg) 40° L crystal malt

0.5 lb (227 g) Special Roast

Mash at 148° F (64° C) for 60 minutes. Sparge at 175° F (79° C) to collect 6.5 gallons (24.6 L) of pre-boiled wort.

Extract Plus Specialty Grain Wort Production

Substitute 5.5 lb. (2.5 kg) light dry malt extract or 7 lb. (3.18 kg) pale malt extract syrup for pils malt. Put crushed specialty malts in grain bag into pot with cold water. Heat pot, stirring every few minutes. Just as the pot begins to simmer, remove the grain bag and let drain into the pot. Add the malt extract and stir until dissolved.

Wort Processing

1.0 oz Northern Brewer pellet hops, 7.4% alpha acid (first wort)

0.75 oz (21 g) Northern Brewer pellet hops, 7.4% alpha acid (20 min)

1 Whirlfloc tablet or 1 tsp. (5 ml) Irish moss (20 min)

1.0 oz (28 g) Northern Brewer pellet hops (knockout)

White Labs WLP810 San Francisco or Wyeast 2112 California lager yeast

At end of boil, chill to 60° F (16° C), aerate and pitch. Ferment at 60° F (16° C) for 7-10 days, then transfer to secondary. When fully attenuated, package, condition and enjoy!

Anchor Liberty Clone

Recipe for 5 gallons (19 L)

Assumptions: 5.5 gallons at end of boil, 70% efficiency.

All-Grain Wort Production

10 lb (4.5 kg) 2-row pale malt

0.5 lb (227 g) 15° L crystal malt

1.0 oz (28 g) Northern Brewer whole hops, 8% alpha acid (90 min)

1.5 oz (43 g) Cascade whole hops, 5% alpha acid (45 min)

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

1.0 oz (28 g) Cascade whole hops, 5% alpha acid (1 min)

2.0 oz (57 g) Cascade whole hops, 5% alpha acid (dry)

1 Whirlfloc tablet or 1 tsp. (5 ml) Irish moss (20 min)

California/American ale yeast or equivalent

Mash at 150° F (65° C) for 60 minutes. Sparge at 175° F (79° C) to collect 6.5 gallons (24.6 L) of pre-boiled wort. Boil 90 minutes. Cool to 65° F (18° C) and pitch yeast. Ferment at 60-62° F (16-17° C) for one week, then siphon into secondary with dry hops. Allow to remain on dry hops at 50-55° F (10-13° C) until fermentation is complete, then package, condition and enjoy!

Extract Plus Specialty Grain Wort Production

Steep crystal malt in 150° F (65° C) water for 20 minutes. Strain, add 7.5 lb. (3.4 kg) light malt extract syrup and 1.25 ounces (35 g) of whole Northern Brewer hops. Proceed with one-hour boil, adding remaining Cascade hops at intervals specified above.

Original Gravity: 1.058

Final Gravity: 1.013

IBU: 47

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Lawrence Steese bought the brewery next, re-opening it in 1960, but continued to struggle with sales, barely hanging on to his remaining draft accounts throughout the city. One such account, at a place called the Old Spaghetti Factory, is where staunch steam beer supporter Fred Kuh suggested to one of his regular clientele that he go see the brewery before it shut down again, and probably for good. That regular was Fritz Maytag, who was eventually to take possession of the brewery, and after 10 years of hard work, actually turned a profit. Maytag worked to make Anchor Steam a consistently high-quality product, using the same traditional methods employed in Gold Rush times, but with modern sanitation, a lab, and in early 1969, packaging in bottles.



Maytag added Anchor Porter to the lineup in 1974, and the following year debuted Liberty Ale to commemorate Paul Revere's historic ride. (See "Clone Beers," *Zymurgy* September/October 2001.) It was added to the brewery's permanent lineup in 1983. Old Foghorn, Anchor's venerable barleywine, made the list in 1985. So it is no surprise that those first four offerings from Anchor played a heavy role in start-



Anchor Porter Clone

Recipe for 5 gallons (19 L)

Assumptions: 5.5 gallons at end of boil, 70% efficiency.

All-Grain Wort Production

13.0 lb (5.9kg) 2-row pale malt
1.0 lb (0.45 kg) 80° L crystal malt
0.75 lb (340 g) chocolate malt
0.25 lb (113 g) black patent malt
2.0 oz (57 g) roast barley

Mash at 156° F (69° C) for 60 minutes. Sparge at 175° F (79° C) to collect 6.5 gallons (24.6 L) of pre-boiled wort.

Extract Plus Specialty Grain Wort Production

Substitute 7 lb. (3.18 kg) light dry malt extract OR 9.5 lb. (4.31 kg) pale malt extract syrup for pale malt. Put crushed specialty malts in grain bag into pot with cold water. Heat pot, stirring every few minutes. Just as the pot begins to simmer, remove the grain bag and let drain into the pot. Add the malt extract and stir until dissolved.

Wort Processing

1.0 oz (28 g) Northern Brewer pellet hops, 5.9% alpha acid (first wort)
1.0 oz (28 g) Cascade pellet hops, 3.25% alpha acid (45 min)
1 Whirlfloc tablet or 1 tsp (5 mL) Irish moss (20 min)
California ale yeast

Boil 60 to 90 minutes, adding hops as indicated above. Cool to 68° F (20° C) and pitch yeast. Ferment at 68-72° F (20-22° C) for one week, then siphon into secondary. When fermentation is complete, package, condition and enjoy!

Original Gravity: 1.068 (16.5° P)

Final Gravity: 1.020 (4° P)

IBU: 36

ing the microbrew and homebrew revolutions, and were the same four to earn top rankings in *Zymurgy's* Best Beer Poll. Who would have thought that from a tiny brewery producing McTeague's humble, uniquely San Franciscan, working-class steam beer would eventually come such refined and sought-after (but still uniquely San Franciscan) ales?

Our clone recipes of Anchor's four top beers, according to the polls, have all been field-tested, the Steam Beer version

submitted by *Alechemist* and *Zymurgy* contributor Marc Sedam, and the Liberty Ale recipe taken from the September/October 2001 Clone Beers column. But when it all boils down, these are simply attempts at homebrewing four world-class beers—if you think you have a recipe that's closer to the original, let us know.

Amahl Turczyn Scheppach is a veteran commercial and home brewer and brewing author who resides in Lafayette, Colo.

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Anchor Old Foghorn Clone

Recipe for 5 gallons (19 L)

Assumptions: 5.5 gallons at end of boil, 70% efficiency.

All-Grain Wort Production

21.0 lb (9.45 kg) 2-row pale malt
1.0 lb (0.45 kg) 80° L crystal malt

Mash at 148° F (64° C) for 60 minutes with about 7 gallons (29 L) water to collect 6.5 gallons (24.6 L) of first wort. (You may need two lauter tuns to do this if you choose to do an all-grain recipe. Drained mash can then be sparged with 175° [79° C] water into another kettle to produce a "small beer.")

Extract Plus Specialty Grain Wort Production

Substitute 11.5 lb. (5.22 kg) light dry malt extract OR 15.5 lb. (7 kg) pale malt extract syrup for pale malt. Put crushed crystal malt in grain bag into pot with cold water. Heat pot, stirring every few minutes. Just as the pot begins to simmer, remove the grain bag and let drain into the pot. Add the malt extract and stir until dissolved.

Wort Processing

2.0 oz (56 g) Cascade pellet hops, 5.75% alpha acid (first wort) 37 IBU
1.0 oz (28 g) Cascade pellet hops, 5.75% alpha acid (45 min) 18.4 IBU
1.0 oz (28 g) Cascade pellet hops, 5.75% alpha acid (30 min) 10.5 IBU
2.0 oz (56 g) Cascade whole hops, 5.75% alpha acid (dry)
1 Whirlfloc tablet or 1 tsp (5 mL) Irish moss (20 min)
California ale yeast

Boil wort 60 to 90 minutes with hop additions as above. Cool to 68° F (20° C) and pitch a generous amount of yeast (pitching the dregs of a previous 5-gallon batch is recommended) and aerate that sucker like nobody's business. Ferment at 68-72° F (20-22° C), rousing the yeast if fermentation appears to stall, for two or more weeks, then siphon into secondary. When gravity nears target final, siphon into another carboy onto dry hops and cold condition at 45° F (7° C) for 18 months. Package, condition and enjoy!

Original Gravity: 1.101 (25° P)

Final Gravity: 1.043 (11° P)

IBU: 65.9

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Great Beer From Kalamazoo? You Bet!

By Mike Bardallis

In any discussion of the best craft breweries, the name of Kalamazoo Brewing Company or founder Larry Bell are bound to come up. KBC, commonly referred to by its trade name "Bell's," is one of the oldest and most unique craft breweries in the U.S. Founded in 1985 on a shoestring, the brewery can no longer be called a microbrewery after steady growth. KBC shipped more than 30,000 barrels last year and, thanks to a recently completed expansion, now has the capacity to produce nearly 60,000 barrels a year.

The history of the craft beer revolution includes many tales of brewers who concocted adventurous, damn-the-prevailing-consumer-taste beers—and most are long dead. Yet Bell's beers are exactly that: imaginative, often quirky, flavorful in the extreme. It's like really good homebrew that you can actually buy at the corner store—or the pub, if you are lucky enough to live in the Midwest.

Yeast strain is important to those wishing to recreate most KBC beers. Most Bell's beers have a distinctive house character from the unique strain of yeast employed. Fortunately, KBC beers are unfiltered and bottle-conditioned, so capturing this important ingredient is easily accomplished. It is a simple matter to leave an ounce of beer in the bottle, swirl to suspend the yeast sediment, and add to a waiting, cooled starter. It's nice to have brewing and drinking beer so neatly integrated.

A curmudgeonly word regarding recipes: they are starting points, not secret formulas for success. Differences in equipment, process and ingredients between breweries are inevitable. Experience in evaluating and brewing beers shortens the learning curve, but there is always some trial and error involved in getting a beer to come out exactly like you want it, if you have a very specific target.

General notes for the recipes

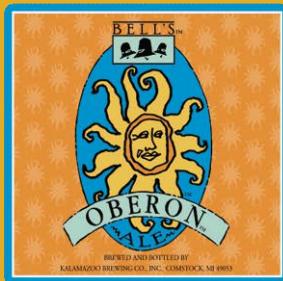
- All recipes are for 5 gallons (20 L).
- Mash efficiency is assumed to be 70-75 percent.
- Unless noted otherwise, water for mashing is 1 qt/lb (2 L/kg). Adding the grist into the prescribed amount of water at 170° F (77° C) in the mash tun should give a mash temperature of 150-152° F (66-67° C) when stabilized.
- Sparge with 165-170° F (74-77° C) water to collect 6 to 6.5 gallons (22.5-24.5 L) of wort.
- Recommended fermentation temperature is 65-69° F (18-21° C).
- Alpha acid values are typical for variety; some adjustment may be necessary.
- For the porter and the various stouts, the addition of a small amount of calcium carbonate, on the order of 1 to 3 teaspoons, to the mash is recommended to buffer the acidity contributed by the roasted grains.

Finally, a note on roasted barley for the darker beers. Published recipes rarely differentiate between types of roasted barley, but there are two different types generally available. Most English roasted barleys are nearly black, like black patent malt, while the typical American roasted barley compares more closely to chocolate malt in color and temperament. Briess Malting offers both kinds these days, as "Roasted" and "Black" barleys. For the stouts we are considering, the blacker, English sort is what we are talking about.

Now brew and enjoy!

Mike Bardallis, a homebrewer since 1989, is the inventor of the famous Kalamazoo Beer Goggles, which use the unique optical properties of Kalamazoo Stout to improve one's outlook on life, the universe and everything. Bardallis wishes to acknowledge the invaluable assistance in researching this article given by Dr. Dennis G. (Skip) Elmer Jr., who doggedly (re)sampled every one of the beers.

Bell's Oberon Clone



Target OG: 1.055

Target IBU: 25

Once known as Solsun, this is an American wheat beer, and another wolf in sheep's clothing. It comes in at 6-percent abv with a lightly spicy, estery, tangy nose and a tart, wheaty flavor just balanced by an earthy bitterness.

5.0 lb (2.3 kg) 2-row malt
4.0 lb (1.8 kg) wheat malt (German or Belgian recommended)
2.0 oz (57 g) Saaz hops, 3% alpha (60 minutes)
0.5 oz. (14g) Saaz hops, 3% alpha (20 minutes)

Use a single step infusion mash in the 150-152° F (66-67° C) range for a highly fermentable wort. Boil for a total of 90 minutes.

Extract brewers, substitute 6.6 lb (3 kg) of a barley/wheat malt extract blend for the above grains.

Ferment with yeast from a fresh bottle of Oberon (this yeast is different from that used in other Bell's ales) or as a second choice, an American wheat strain such as Wyeast 1010 or White Labs WLP320.

Bell's Pale Ale Clone



Target OG: 1.050

Target IBU: 30

Very light floral hop aroma and noticeable fruity esters in the nose, straightforward, toasty malt flavor with clean noticeable bitterness. High quaffability quotient without being boring.

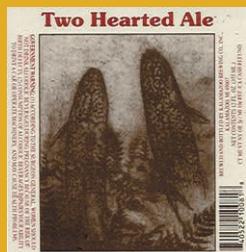
8.5 lb (3.86 kg) Pale 2 row malt
0.5 lb (227 g) Victory malt
1.2 oz.(35 g) Hallertau hops,
6% alpha (60 minutes)
0.25 oz.(7 g) Hallertau hops,
6% alpha (10 minutes)

Use a single step infusion mash in the 150-152° F (66-67° C) range for a highly fermentable wort.

For an **extract version**, replace pale 2 row malt with 6.6 lb (3 kg) light malt extract syrup or 5.5 lb (2.5 kg) light dry malt extract. Put the crushed Victory malt into a grain bag and place in your brewpot in 1 to 1.5 gallons of water and begin heating. Remove the grain bag as the pot begins to simmer. Dissolve the malt extract in the liquid and top up to your boiling volume with additional water.

Boil for a total of 90 minutes. Add 3.5 g powdered Irish moss, rehydrated, at around the last 20 minutes if you are so inclined. Ferment with Bell's yeast, or as a second choice, an Irish strain such as Wyeast 1084

Bell's Two Hearted Ale Clone



Target OG: 1.062

Target IBU: 60

An IPA among IPAs, this beer is a showcase for the wonderful bittersweet character of Centennial hops. Like many Bell's beers, it is dangerously easy to drink despite a healthy 7-percent alcohol by volume (abv) content.

All-Grain Wort Production

7.0 lb (3.2 kg) pale 2-row malt
3.0 lb (1.4 kg) Munich malt
1.0 lb (0.45 kg) crystal malt 20L

Use a single step infusion mash in the 150-152° F (66° C) range for a highly fermentable wort.

Partial Mash Wort Production

6.6 lb (3 kg) pale malt extract syrup
or 5.5 lb (2.5 kg) pale dry malt extract
3.0 lb (1.36 kg) Munich malt
1.0 lb (0.45 kg) 20L crystal malt

Add crushed specialty malts to 1 gallon of water at 170° F (77° C), and steep for 20-30 minutes, stirring occasionally. The mini-mash should stabilize at about 150-155° F (66-68° C). Drain off the liquid to your brewpot. The use of a grain bag will greatly reduce the difficulty of separating liquid from grain. Add another gallon of 170° F water to the grain, stir briefly, and drain into your brewpot. Discard the spent grains.

Dissolve the malt extract into the collected wort, top off the kettle with water, and boil away.

Wort Processing

1.1 oz (32 g) Centennial hops, 10% alpha (60 minutes)
1.0 oz (28 g) Centennial hops, 10% alpha (20 minutes)
0.5 oz (14 g) Centennial hops, 10% alpha (dry hop)

Boil for a total of 90 minutes. Add 0.12 oz (3.5 g) powdered Irish moss, rehydrated, at around the last 20 minutes if you are so inclined.

Ferment with Bell's yeast, or as a second choice, an Irish strain such as Wyeast 1084. Add dry hops to the secondary if bottling, or to the keg in a hop sock if packaging for draft.

Bell's Double Cream Stout Clone



Target OG: 1.068

Target IBU: 50

The phrase "typical Bell's beer" may be an oxymoron, but it applies to this brew if you use a sort of consistent, eccentric logic, and consider whether "I wish I'd thought of that!" can be applied. This is a strongish, rich, roasty stout that has had its base pale malt replaced with Munich. The result is "bock beer meets stout," a fortuitous meeting indeed.

All-Grain Wort Production

10.0 lb (4.54 kg) Munich malt

1.0 lb (0.45 kg) flaked barley

1.0 lb (0.45 kg) roasted barley

Use a single step infusion mash in the 150-152° F (66-67° C) range for a highly fermentable wort.

Extract Plus Specialty Grain Wort Production

For the Munich malt in the all-grain grist bill, substitute:

3.3 lb (1.5 kg) amber malt extract syrup

3.3 lb (1.5 kg) dark malt extract syrup

2 lb (0.9 kg) pale 2 row malt

Place the crushed malt and flaked barley into a grain bag and add to 3 quarts (3 L) of 170° F (77° C) water. Let steep for 20 to 30 minutes, stirring occasionally. The mini-mash should stabilize at about 150-155° F (66-68° C). Meanwhile, put the crushed roasted barley into a grain bag and place in your brewpot in 1 to 1.5 gallons of water and begin heating. Remove the grain bag as the pot begins to simmer.

Drain off the liquid from your "mini-mash" to your brewpot. Add another gallon of 170° F (77° C) water to the grain, stir briefly, and drain into your brewpot. Discard the spent grains. Dissolve the malt extract into the collected wort, top up the kettle with water, and boil away.

Wort Processing

1.25 oz (36 g) Nugget hops, 10% alpha (60 min)

Boil for a total of 90 minutes. Any hop variety that can provide a fairly neutral bitterness is OK. Yeast is less critical with this one; an American Ale yeast strain such as Wyeast 1056 is actually a good choice.

Bell's Java Stout Clone



Target OG: 1.075

Target IBU: 40

OK, now we are solidly into the Eccentric Zone. This strong stout, made with a blend of Sumatra and espresso roast coffee, is a one-of-a-kind.

A friend has remarked on jalapeño notes, and I must concur. It is stronger than most of the beers mentioned thus far, and very dry.

11.0 lb (5 kg) pale 2-row malt

1.5 lb (0.68 kg) flaked barley

1.0 lb (0.45 kg) roasted barley

0.5 lb (227 g) crystal malt (40L)

0.5 lb (227 g) espresso roast or

French roast coffee

1.0 oz. (28 g) Centennial hops,

10% alpha (60 minutes)

Use a single step infusion mash in the 150-152° F (66-67° C) range for a highly fermentable wort. Boil for a total of 90 minutes. Add the coffee, coarsely ground and in a grain bag, when 10 minutes remain to boil. Yeast is less critical with this one; an American Ale yeast strain such as Wyeast 1056 is actually a good choice.

Bell's Batch 5000 Clone

Target OG: 1.100

Target IBU: 40

Each incremental 1000th batch of beer coming out of Kalamazoo brings a commemorative one-off batch of beer. 5000 was a smoked barleywine sort of thing. Rich, ruddy, sweetly smoky in aroma and flavor, this is a beer to squirrel away and savor periodically as it ages. I hope you have some stashed in your cellar, too.

14.0 lb (6.35 kg) Pale 2-row malt
7.0 lb (3.2 kg) Munich malt
7.0 lb (3.2 kg) rauch malt
1.25 oz. (36 g) Nugget hops, 10% alpha (60 minutes)

Use a single step infusion mash at around 155-158° F (68-70° C) for a dextrin-rich wort. Collect as much wort as practical, and reduce volume to approximately 5.5 gallons (22 L) through extended boiling. Yeast strain is less important to this beer than yeast quantity and vitality; virtually any standard American or English strain will work provided it is healthy.

The recommended method is to repitch the slurry from a healthy batch of normal strength ale.

This is a beer that should be patiently matured in a variety of odd bottles.

The author is not recommending an extract version, as the only commercial rauch malt extract he has sampled produced some rather startling and unappetizing beers. For those mashes that cannot handle the large volume of grist, substituting 9.9 lb (4.5 kg) of extract syrup for the pale malt may be an option.

Bell's Third Coast Old Ale Clone

Target OG: 1.095

Target IBU: 80

For all of you non-Michigander readers out there, Third Coast refers to Michigan's extensive shoreline (East Coast, West Coast, Third Coast.) This is really a barleywine, and unlike so many of the previous beers, you know it's a big 'un right away. Hops, malt and lots of fruity esters meet the nose, and then one tastes the massive malty sweetness that is more than balanced by the very high hop bitterness. This beer, like all of the other strong ales from KBC, is not vintage dated, but has the potential for extended cellaring.

24.0 lb (11 kg) pale 2-row malt
1.0 lb (0.45 kg) Victory malt
0.5 lb (227 g) crystal 40 L
0.5 lb (227 g) crystal 80 L
2.0 oz (57 g) Centennial hops, 10% alpha (60 minutes)
2.0 oz (57 g) Centennial hops, 10% alpha (20 minutes)
0.5 oz (14 g) Centennial hops, 10% alpha (end of boil)

Use a single step infusion mash in the 150-152° F (66-67° C) range for a highly fermentable wort. Collect as much wort as practical, and reduce volume to approximately 5.5 gallons through extended boiling. Yeast strain is less important to this beer than yeast quantity and vitality; virtually any standard American or English strain will work provided it is healthy.

The recommended method is to repitch the slurry from a healthy batch of normal strength ale.

Bell's Porter Clone



Target OG: 1.055

Target IBU: 35

Liquid silk. Lightly chocolate aroma, with a bit of a coffee-like roast. Chocolaty, bittersweet flavor capped by a subtle dry roast finish.

One of the author's all-time favorite beers on cask.

All-Grain Wort Production

9.0 lb (4.1 kg) Pale 2 row malt
1.0 lb (0.45 kg) Munich malt
0.5 lb (227 g) flaked barley
0.5 lb (227 g) chocolate malt
0.5 lb (227 g) crystal malt 80L
0.25 lb (113 g) black patent malt

Use a single step infusion mash in the 150-152° F (66-67° C) range for a highly fermentable wort.

Extract Plus Specialty Grain Wort Production

In place of the pale and Munich malts, and the flaked barley, substitute:

6.6 lb (3 kg) light malt extract syrup or 5.5 lb (2.5kg) dry light malt extract
1.0 lb (0.45 kg) Carapils malt

Put the crushed specialty malts into a grain bag and place in your brewpot in 1 to 1.5 gallons of water and begin heating. Remove the grain bag as the pot begins to simmer. Dissolve the malt extract in the liquid and top up to your boiling volume with additional water.

Wort Processing

0.875 oz. (25 g) Centennial hops, 10% alpha (60 minutes)

Boil for a total of 90 minutes. The Bell's yeast is recommended for this one; other decent choices include an Irish ale like Wyeast 1084 or White Labs WLP004.

Bell's Expedition Stout Clone



Target OG: 1.110

Target IBU: 100

A monster of a beer. Hugely bittersweet, malty and fruity, with a lingering bitterness from massive amounts of hops and roasted malts. Considered by some to be the breakfast drink of kings.

23.0 lb (10.5 kg) pale 2-row
1.0 lb (0.45 kg) flaked barley
1.5 lb (0.68 kg) roasted barley
1.0 lb (0.45 kg) black patent
1.0 lb (0.45 kg) crystal 80L
0.5 lb (227 g) chocolate malt
3.3 lb (1.5 kg) amber malt extract
2.5 oz (72 g) Centennial hops,
10% alpha (45 minutes)
1.5 oz (43 g) Centennial hops,
10% alpha (30 minutes)
0.5 oz (14 g) Centennial hops,
10% alpha (end of boil)

Use a single step infusion mash in the 150-152° F (66-67° C) range. Collect as much wort as practical, and reduce volume to approximately 5.5 gallons through extended boiling. Add the extract to the collected wort at the beginning of the boil. Yeast strain is less important to this beer than yeast quantity and vitality; virtually any standard American or English strain will work provided it is healthy. The recommended method is to repitch the slurry from a healthy batch of normal strength ale.

Bell's Rye Stout Clone

Target OG: 1.065

Target IBU: 45

This remarkable beer has chocolate, spicy rye and caramel notes in flavor and aroma. Have we mentioned the dangerous combination of drinkability and high alcohol content?

All-Grain Wort Production

8.0 lb (3.63 kg) 2 row malt

1.5 lb (0.68 kg) flaked rye

0.5 lb (227 g) roasted barley

0.5 lb (227 g) chocolate malt

0.5 lb (227 g) crystal 80L

Use a single step infusion mash in the 150-152° F (66-67° C) range for a highly fermentable wort.

Partial Mash/Extract Wort Production

1.5 lb (0.68 kg) 2 row malt

1.5 lb (0.68 kg) flaked rye

0.5 lb (227 g) roasted barley

0.5 lb (227 g) chocolate malt

0.5 lb (227 g) crystal 80L

6.6 lb (3 kg) light malt extract syrup or
5.5 lb (2.5 kg) light dry malt extract

The flaked rye requires malt enzymes for conversion, so we are starting to get into some larger volume here.

Let us handle it thus: Place the crushed barley and the flaked rye into a grain bag and add to 3 quarts (3 L) of 170° F (77° C) water. Let steep for 20 to 30 minutes, stirring occasionally. The mini-mash should stabilize at about 150-155° F (66-68° C). Meanwhile, put the crushed roasted barley, chocolate malt and crystal into a grain bag and place in your brewpot in 1 to 1.5 gallons (3.8-5.6 L) of water and begin heating. Remove the grain bag as the pot begins to simmer.

Drain off the liquid from your "mini-mash" to your brewpot. Add another gallon of 170° F (77° C) water to the grain, stir briefly, and drain into your brewpot. Discard the spent grains. Dissolve the malt extract into the collected wort, top up the kettle with water, and boil away.

Wort Processing

1.1 oz. (31 g) Nugget hops, 10% alpha (60 minutes)

Boil for a total of 90 minutes Any hop variety that can provide a fairly neutral bitterness is OK. Yeast is less critical with this one; an American Ale yeast strain such as Wyeast 1056 is actually a good choice.

Bell's Consecrator Doppelbock Clone

Target OG: 1.081

Target IBU: 28

A lager beer! Of course, it would have to be a big, rich, strong lager beer, though. A deep reddish amber beer, with a slightly fruity, malty aroma, this beer has a sweet malt flavor that is not cloying and a clean finish. The flavor profile includes some hints of raisin and prune, similar to but not as evident as in Celebrator.

All-Grain Wort Production

8.5 lb (3.86 kg) German Munich malt

5.5 lb (2.5 kg) German Pils malt

0.5 lb (227 g) Briess Extra Special malt

Conduct a decoction mash as follows. Dough in grist with 14 quarts (13 L) of water at 142° F (61° C) for a strike temperature of 132° F (56° C). At 20 minutes, pull about 5.5 quarts thick mash for the first decoction. Heat decoction to about 155° F (68° C) and hold for 10 minutes. Raise decoction to boil and hold 15 minutes. Return to main mash for 155° F strike temperature, adjusting temp with infusions of boiling or cold water as necessary. Rest until saccharification is complete. Pull approximately 40 percent of the total mash liquid for the next decoction. Heat the decoction to boiling and hold for 5 minutes. Return to main mash for a mashout strike temperature of 165-170° F (74-77° C). Lauter and sparge as usual.

Extract Plus Specialty Grain Wort Production

For the Munich and Pils malts, substitute 6.6 lb (3 kg) Dark Malt Extract syrup and 3.3 lb (1.5 kg) Amber malt extract syrup. Put the crushed Extra Special malt into a grain bag and place in your brewpot in 1 to 1.5 gallons (4-6 L) of water and begin heating. Remove the grain bag as the pot begins to simmer.

Dissolve the malt extract in the liquid and top up to your boiling volume with additional water.

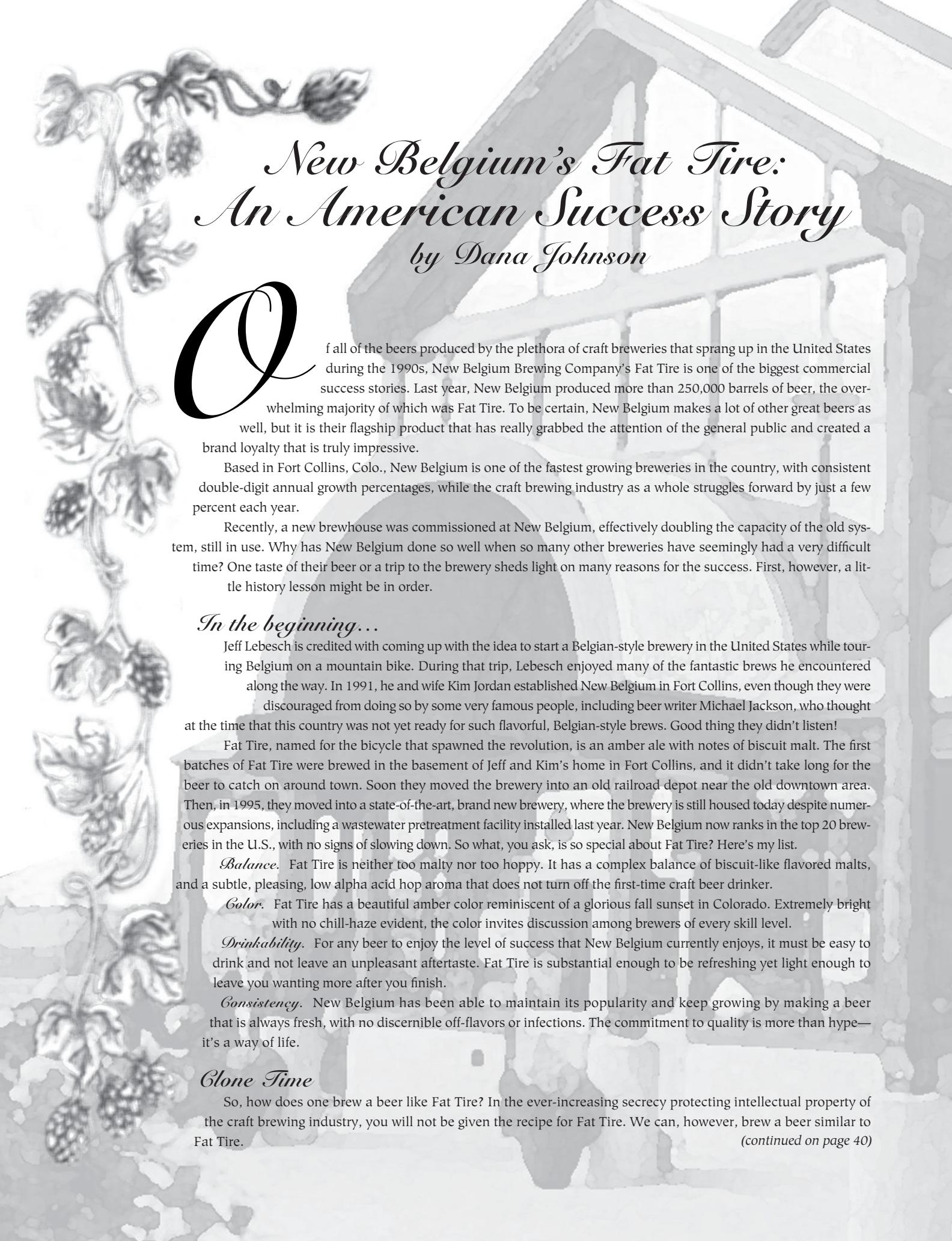
Wort Processing

1.0 oz (28 g) Hallertau hops, 6% alpha (60 minutes)

0.5 oz (14 g) Hallertau hops, 6% alpha (20 minutes)

Boil for 90 minutes with hop additions as shown above.

Ferment at around 50° F (10° C) if it can be managed, with a good German lager yeast. Because of the high OG of this beer, it is recommended to pitch a hefty slurry from a previous healthy batch of lager. Recommended strains are Wyeast W2308, 2206, 2124, or White Labs WLP820 or WLP830. Extended lagering of the beer at near-freezing temperatures are recommended to smooth and mellow this one.



New Belgium's Fat Tire: An American Success Story

by Dana Johnson

Of all of the beers produced by the plethora of craft breweries that sprang up in the United States during the 1990s, New Belgium Brewing Company's Fat Tire is one of the biggest commercial success stories. Last year, New Belgium produced more than 250,000 barrels of beer, the overwhelming majority of which was Fat Tire. To be certain, New Belgium makes a lot of other great beers as well, but it is their flagship product that has really grabbed the attention of the general public and created a brand loyalty that is truly impressive.

Based in Fort Collins, Colo., New Belgium is one of the fastest growing breweries in the country, with consistent double-digit annual growth percentages, while the craft brewing industry as a whole struggles forward by just a few percent each year.

Recently, a new brewhouse was commissioned at New Belgium, effectively doubling the capacity of the old system, still in use. Why has New Belgium done so well when so many other breweries have seemingly had a very difficult time? One taste of their beer or a trip to the brewery sheds light on many reasons for the success. First, however, a little history lesson might be in order.

In the beginning...

Jeff Lebesch is credited with coming up with the idea to start a Belgian-style brewery in the United States while touring Belgium on a mountain bike. During that trip, Lebesch enjoyed many of the fantastic brews he encountered along the way. In 1991, he and wife Kim Jordan established New Belgium in Fort Collins, even though they were discouraged from doing so by some very famous people, including beer writer Michael Jackson, who thought at the time that this country was not yet ready for such flavorful, Belgian-style brews. Good thing they didn't listen!

Fat Tire, named for the bicycle that spawned the revolution, is an amber ale with notes of biscuit malt. The first batches of Fat Tire were brewed in the basement of Jeff and Kim's home in Fort Collins, and it didn't take long for the beer to catch on around town. Soon they moved the brewery into an old railroad depot near the old downtown area. Then, in 1995, they moved into a state-of-the-art, brand new brewery, where the brewery is still housed today despite numerous expansions, including a wastewater pretreatment facility installed last year. New Belgium now ranks in the top 20 breweries in the U.S., with no signs of slowing down. So what, you ask, is so special about Fat Tire? Here's my list.

Balance. Fat Tire is neither too malty nor too hoppy. It has a complex balance of biscuit-like flavored malts, and a subtle, pleasing, low alpha acid hop aroma that does not turn off the first-time craft beer drinker.

Color. Fat Tire has a beautiful amber color reminiscent of a glorious fall sunset in Colorado. Extremely bright with no chill-haze evident, the color invites discussion among brewers of every skill level.

Drinkability. For any beer to enjoy the level of success that New Belgium currently enjoys, it must be easy to drink and not leave an unpleasant aftertaste. Fat Tire is substantial enough to be refreshing yet light enough to leave you wanting more after you finish.

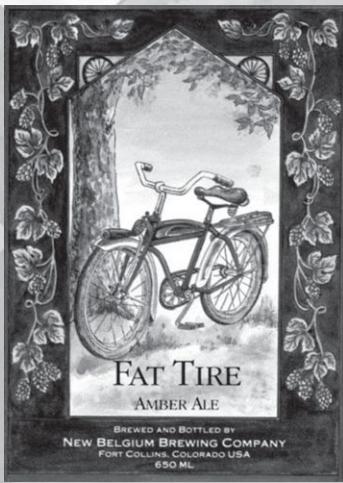
Consistency. New Belgium has been able to maintain its popularity and keep growing by making a beer that is always fresh, with no discernible off-flavors or infections. The commitment to quality is more than hype—it's a way of life.

Clone Time

So, how does one brew a beer like Fat Tire? In the ever-increasing secrecy protecting intellectual property of the craft brewing industry, you will not be given the recipe for Fat Tire. We can, however, brew a beer similar to Fat Tire.

(continued on page 40)

Fat Tire Amber Ale Clone



Target O.G.: 1.050 (12.5° P)

Target T.G.: 1.015 (2.5° P)

Expected ABV: 4.5%

Target IBUs: 20

Extract Plus Specialty Grain Wort Production

3.0 lb (1.35 kg) Plain extra-light malt extract syrup

1.5 lb (0.675 kg) Plain extra-light dry malt extract

1.0 lb (0.45 kg) Crystal malt (20° Lovibond)

0.50 lb (227 g) Munich malt (toasted, see text for details)

0.25 lb (113 g) Biscuit malt

0.25 lb (113 g) Chocolate malt

Steep specialty grains in a pot in approximately 2 gallons (7.5 liters) water at 150° F (66° C) for 15 to 30 minutes. Strain the grains from the water and add the malt extracts to the water. Over medium heat, stir the extracts constantly until dissolved.

All-Grain Wort Production

Mash 6 lb (2.72 kg) pale malt with specialty malts (see above) in 9 quarts (8.5 liters) of water to get a single infusion mash temperature of 154° F (68° C) for 45 minutes. Sparge with hot water of 170° F (77° C) or so to get 5.5 gallons (20.8 liters) of wort.

The Boil

As the wort comes to a boil, add 0.75 oz (21 g) Willamette or Hallertauer whole flower or pellet hops. Boil for 30 minutes, then add 1 tsp (5 ml) Irish moss. Fifteen minutes before the end of the boil, add 0.50 oz (14 g) Fuggle or Kent Golding pellet hops. Five minutes before the end of the boil, add 0.75 oz (21 g) Fuggle or Kent Golding pellet hops.

Fermentation

Cool wort to about 65-70° F (18-21° C) and transfer to fermenter. Pitch yeast (White Labs California Ale Yeast [WLP001] or Wyeast 1056) and then ferment at 60-65° F (16-18° C.) until complete (7 to 10 days). Transfer to a secondary vessel, or rack into bottles or keg with 0.67 to 0.75 cup (160-180 ml) corn sugar to prime. The reduced amount of corn sugar for priming helps copy the low carbonation level of Fat Tire. Aging the beer at cellar temperature for a month or two helps the flavor and gives the beer more carbonation.

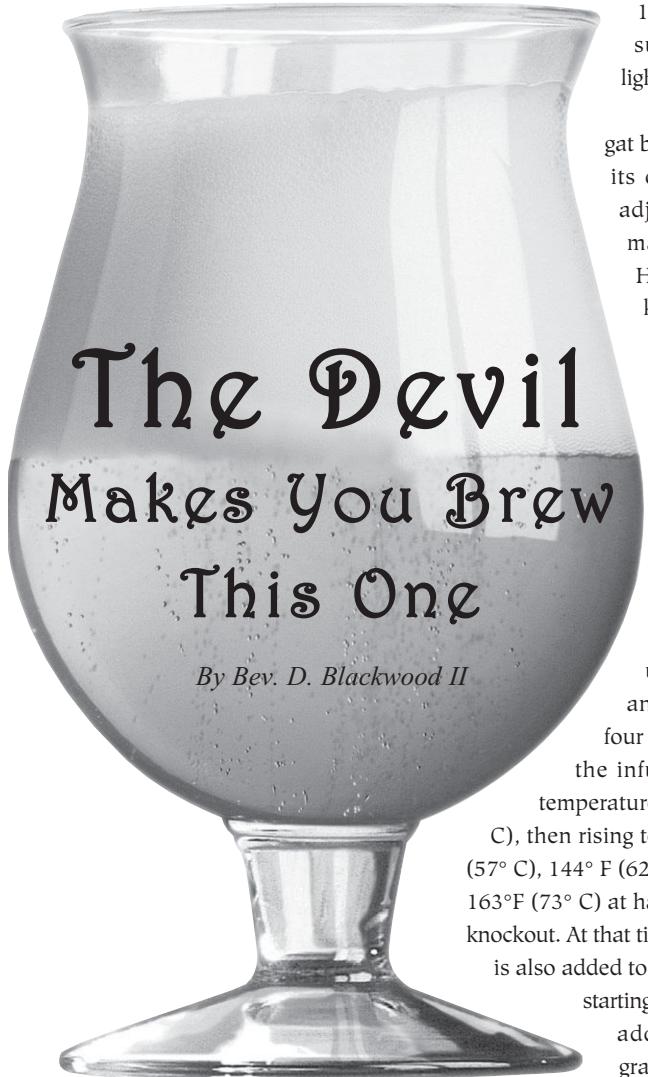
New Belgium (from page 38) The grain bill for Fat Tire should include a lot of lightly colored malts, including Specialty, Munich and light caramel or about 20° Lovibond crystal malt for the amber hue. For the

biscuit flavor add 5 to 10 percent toasted malt. Toasting 2-row or Munich malt in the oven on a cookie sheet works well. Preheat the oven to 350° F (175° C), then toast the grain on a cookie sheet until golden brown. This method works especially well for malt extract batches. For hopping, aim for around 16-20 IBUs, using low-alpha acid aroma or dry hop varieties.

The yeast used should be a strain that does not create a lot of diacetyl or esters. White Labs California Ale or Wyeast 1056 are common strains that work well for this type of beer. Ferment the batch at about 60-65° F (16-18° C) to keep the esters low, then give the yeast enough time to take up the diacetyl before transferring or crashing the temperature of the beer. After fermenting, and bottling or kegging, the beer should be clear, not overly carbonated, and have a nice mild, toasted malt and hop aroma for the flavor complexity in the finished product.



Dana Johnson has been homebrewing since 1989 and has been selling cleaning and sanitizing products to brewpubs and microbreweries since 1995. Johnson is member of the Master Brewers Association of the Americas (MBAA), the American Society of Brewing Chemists (ASBC) and the Keg Ran Out Club (KROC). When not brewing, bottling or attending beer-related events, he enjoys spending time with his wife and three children.



Looking at the “devil of a beer” known as Duvel, you’d never know that it started out as a dark beer that was reformulated to accommodate modern-tastes. Thankfully the change didn’t lose any of the rich alcoholic complexity that has made it a classic.

The Belgian brewery where Duvel is crafted dates from 1871, when Jan-Leonard Moortgat founded a farmhouse brewery in Breendonk, north of Brussels. His son, Albert, became the brewer for the family business and traveled to Scotland in 1926 searching for a unique yeast strain to give the beer a distinctive character. The Scottish ale yeast he returned with fermented both the original dark Duvel and the present beer. The shift in color occurred in the early

1970s as a result of consumer preferences for lightly colored beers.

At that time, the Moortgat brewery was still running its own floor maltings, so adjusting the color of the malt wasn’t a big issue. However, any brewer knows that high gravities invariably lead to darker beers, which meant they had to use the palest malt possible—thus Pilsner malt ends up constituting the bulk of the present-day grist. This malt is mashed with well water and undergoes a long mash and sparge, taking nearly four hours. During that time the infusion is stepped up in temperature, starting at 113° F (45° C), then rising to 125° F (51° C), 136° F (57° C), 144° F (62° C), 154° F (67° C) and 163°F (73° C) at half-hour intervals before knockout. At that time dextrose (corn sugar) is also added to the wort to increase the starting gravity, but without the added color additional grain would impart.

The boil lasts 90 minutes, during which Czech Saaz and Styrian Goldings hops are added to give the beer its distinctive aroma. Fermentation takes place anywhere from 68° to 78° F (20°-26° C), leaving plenty of room for the formation of the fruity esters the beer is noted for. Unlike at many Belgian breweries, the beer is carefully protected from wild yeasts and other contaminants and conventional stainless steel tanks are used throughout primary fermentation. One unique aspect of the process is the secondary fermentation performed in the bottle after the primary fermentation and filtration. Again a priming dose of dextrose is added along with fresh yeast, and the bottled product undergoes a secondary fermentation at 72° F (22° C) for another two to three weeks.

This unique method of maturing serves to boost the alcohol content yet again. While the

Duvel Clone

(Bev's Bedeviling Belgian Ale)

Target O.G.: 1.072 (17.5° P)

Target T.G.: 1.010 (2.4° P)

Expected ABV: 8.5%

Target IBUs: 35.9

All-Grain Wort Production

15.0 lb (6.80 kg) Durst Pilsner malt
1.5 lb (0.68 kg) Belgian Caramel Pils malt
1.25 lb. (0.56 kg) corn sugar (dextrose)

Mash with 3.5 gallons (13.3 L) of water to achieve 132° F (55.5° C). Rest for 20 minutes. Step up temperature (via water additions or decoction) to 158° F (70° C) via 3-4 steps of 15 minutes each, with 15 minutes rest. Hold final temperature for 1 hour. Sparge with 4 to 5 gallons (15-19 L) of water to collect 6.5 to 7.0 gallons (25-26.5 L) of wort.
(Assumptions: 5.5 gallons at end of boil, 59 percent efficiency.)

The Boil

Boil for 60 minutes. Add 2 oz (57 g) of Styrian Golding hops at the beginning of the boil. Ten minutes before end of boil, add 1 oz. (28 g) of Czech Saaz hops. At the end of the boil, add 1 oz. (28 g) of Czech Saaz hops. At end of boil, chill, aerate and pitch with White Labs WLP570 Belgian Golden Ale yeast or Wyeast 1388 Belgian Strong Ale. (Note: If not using a starter, doubling your pitch rate is recommended.)

Fermentation

Ferment at 74-76° F (23.8° C). Note that the recommended ale yeasts tend to slow down as they approach terminal gravity. Occasional "rousing" of the yeast can help fermentation.

Tasting note: Beer starts to "peak" at about 4-6 months of age.



original wort has an original gravity of 1.056, the two additions of dextrose boost the effective OG to a far more hefty 1.073, according to Michael Jackson's *Great Beers of Belgium*. The yeast handles the resulting strength well, taking the beer to approximately 8.5 percent alcohol by volume.

Bottle conditioning after fermentation takes a minimum of six weeks, after which the beer continues to mature during storage and transport, which means the beer is often more than four to five months old when purchased. The long maturation yields a rich blend of malt and hops with a distinctive character and potent alcohol bite. Devilishly tasty!

Bev Blackwood has been brewing since 1998 and is constantly seeking to learn new things about the world of beer. He writes about Texas beers for the *Southwest Brewing News* and is editor of the Foam Rangers' Brewsletter Urquell. He serves as AHA liaison for the greater Houston area and is a BJCP certified judge.

Ommegang Abbey Ale

By Jeff Sparrow

The spirit of Belgian brewing has infected more than one U.S. commercial brewer. In Cooperstown, N.Y.—a town better known for its homage to baseball than as a former hop-growing area—Brewery Ommegang was founded for the sole purpose of making bottle-conditioned Belgian style ales. Ommegang Abbey Ale ranked in the top 10 in our survey—well ahead of classics such as Celis White, Chimay and Duvel, not to mention American rival New Belgium Brewing Co. Here's our interpretation of this tasty brew. (page 42)



Jeff Sparrow can often be found brewing some type of Belgian-style ale at his home in Chicago.

Ommegang Abbey Ale Clone

Target O.G.: 1.083 (21° P)

Target T.G.: 1.018 (4.5° P)

Expected ABV: 8.5%

Target IBUs: 23

All-Grain Wort Production

11.0 lb (5 kg) Belgian Pilsner malt
2.0 lb (0.9 kg) Belgian Vienna malt
1.0 lb (0.45 kg) Belgian Caravienne malt
1.0 lb (0.45 kg) Belgian amber candi sugar
8.0 oz (227 g) Belgian Aromatic malt
4.0 oz (113 g) Belgian Special B malt
2.0 oz (57 g) Belgian Chocolate malt

Mash with 5 gallons (18.9 L) of water to achieve 150° F (66° C).

Rest for one hour. Sparge with 5 gallons (19 L) of water to collect 6.5 gallons (21-25 L) of wort.
(Assumptions: 5.5 gallons at end of boil, 70 percent efficiency.)

Extract With Specialty Grain Wort Production

6.6 lb (3 kg) malt extract syrup (light or pale) or 5.5 lb (2.5 kg) dry malt extract (light or pale)

Put crushed malt in 2-grain bags into pot with cold water. Heat pot, stirring every few minutes. Heat to 150° F (66° C) and hold for 1 hour. Remove grain bag and heat, adding malt extract as it begins to boil. Stir until extract is dissolved.

The Boil

Boil for 90 minutes (a longer boil helps to achieve the ruby color.)

Seventy-five minutes before end of boil add 2 oz (57 g) of whole Czech Saaz hops or 1.75 oz. (50g) of pellets at 4.0% alpha acid. Thirty minutes before end of boil add candi sugar. Five minutes before end of boil add 0.5 oz (14 g) of Czech Saaz hops.

At end of boil chill, aerate and pitch with a fruity Belgian yeast like Wyeast 1214.

Fermentation

Ferment at yeast supplier's recommended temperature. After 3-4 weeks in secondary, package with 4.5 oz. (127 g) sugar and fresh yeast.

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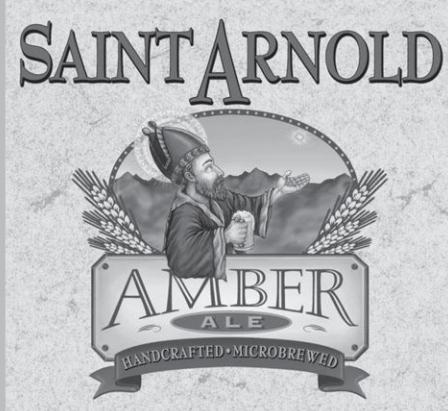
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A Saintly Amber Beer

By Bev D. Blackwood II



The Amber is simple, relying on 2-row pale malt for the backbone and Belgian Cara-Vienne for some residual sweetness. Wagner calls Amber “the poster child for Cara-Vienne” malt. American hop varieties dominate, with Cascade for bitterness and flavor and Liberty for aroma. The key, though, is the yeast. Saint Arnold’s yeast is proprietary and a closely guarded secret. Its fermentation characteristics are very English, though, which gives homebrewers a variety of options to play with. The yeast has “great

fruit, and a nice creamy taste to it. It’s not as buttery as a Fuller’s, but it goes that way,” remarks Wagner. He recommends a London Ale-type yeast to get as close as possible to the real thing.

The beer is also distributed in a cask-conditioned version, which features an added dose of Liberty hops to give it a huge floral nose. It’s truly a hop lover’s delight, and easily duplicated by the homebrewer by dry-hopping in the secondary.

Bev Blackwood has been brewing since 1998 and is constantly seeking to learn new things about the world of beer. He writes about Texas beers for *Southwest Brewing News* and is editor of the *Foam Rangers Newsletter Urquell*. He serves as AHA liaison for the greater Houston area and is a BJCP certified judge.



When Brock Wagner opened Saint Arnold Brewery, he left the relatively secure world of investment banking to do something he loved. Time has so far proven it to be a wise choice. Founded in 1994, Saint Arnold is the oldest microbrewery in Texas, although that fact is more a testament to the difficulty of succeeding in the industry than being first to market. Distributed solely in Texas, the beer is a regional favorite with a national following.

Saint Arnold Amber is the flagship beer of the brewery. Wagner’s original concept for the beer was for it to be “the perfect pale ale.” However, the beer itself shies away from the traditional American pale ale style of Sierra Nevada. “I’ve always thought [Sierra Nevada] lacked character from the yeast and didn’t have enough malt flavor,” says Wagner. With Saint Arnold Amber, “You immediately get a big, malty mouth-feel and a big hop flavor,” Wagner says. When asked to characterize the beer, his answer doesn’t really pigeonhole the beer into a defined category. “It is a combination of American pale ale and British pale ale,” he says with a smile.

The recipe, which Wagner freely shares, was developed with the assistance of the late Dr. George Fix. Wagner would travel to Dallas and brew with Fix regularly while developing the brewery’s original recipes.

Saint Arnold Amber Ale Clone

Target O.G.: 1.055 (13.8° P)

Target T.G.: 1.010 (2.8° P)

Expected ABV: 5.5%

Target IBUs: 36.1

ALL-GRAIN WORT PRODUCTION

11.0 lb (5.0 kg) American 2-row malt
1.5 lb (0.7 kg) Belgian Cara-Vienne malt

Mash with 4.5 gallons (17 L) of water to achieve 155° F (68° C). Rest for one-and-a-half hours. Sparge with 4 to 5 gallons (15-19 L) of water to collect 6.5 to 7.0 gallons (25-26.5 L) of wort. (Assumptions: 5.5 gallons [20.8 L] at end of boil, 63-percent mash efficiency.)

EXTRACT

Scott Birdwell of DeFalco’s Homebrew Supply recommends the following extract approach for a “St. Almost” Amber:

6.5 lb Light Malt Extract
1.5 lb American 2-Row pale malt
1.5 lb Belgian Cara-Vienne malt

Steep grains in 1 gallon of water heated to 160-170° F (72-77° C) for 30 min-

utes. Rise with 168° F (76° C) water to bring total volume to 2 gallons. Add malt extract and water to bring to full volume (approximately 5.5 gallons) and bring to boil for one hour.

THE BOIL

Boil for 90 minutes. For the all-grain wort, add 1.0 oz. (28 g) of Cascade Hops 45 minutes from the end of the boil, then 30 minutes before end of boil, add another 1.0 oz. of Cascade hops. At the end of the boil, add 1 oz. of Liberty hops.

For the extract version, Birdwell recommends the following hopping for the extract version: Add 1.3 oz. (38 g) of Cascade hops for 45 minutes, add 0.5 oz (14 g) of Liberty hops for 10 minutes and 0.5 oz (14 g) of Liberty hops at the end of the boil.

At end of boil, chill, aerate and pitch with Wyeast 1968 London ESB Ale yeast or White Labs WLP002 English Ale yeast.

FERMENTATION

At the end of primary fermentation, if desired, add 0.5 to 1 oz. (14-28 g) of Liberty hops to secondary for added aroma.

Even Homebrewers Need a Lawnmower Beer

By Bev D. Blackwood II



Houston's summers are long, hot and humid, so Saint Arnold Fancy Lawnmower Beer was born of necessity. Brewmaster and owner Brock Wagner likes to recount how even the most hard-core homebrewers would end up with at least one or two bottles of Lone Star, Pearl or another American light lager lurking in the back of their fridge. When confronted with the evidence, they would refer to the macro-brew as their "lawnmower beer."

"Life is too short to ever drink bad beer," smiles Wagner. "We wanted to make a lighter beer, something that was easier to drink for the summertime." Wagner noted that sales of the brewery's flagship Amber Ale, a decidedly more substantial ale, tended to flag during the hottest months of the year, so it wasn't all about taste.

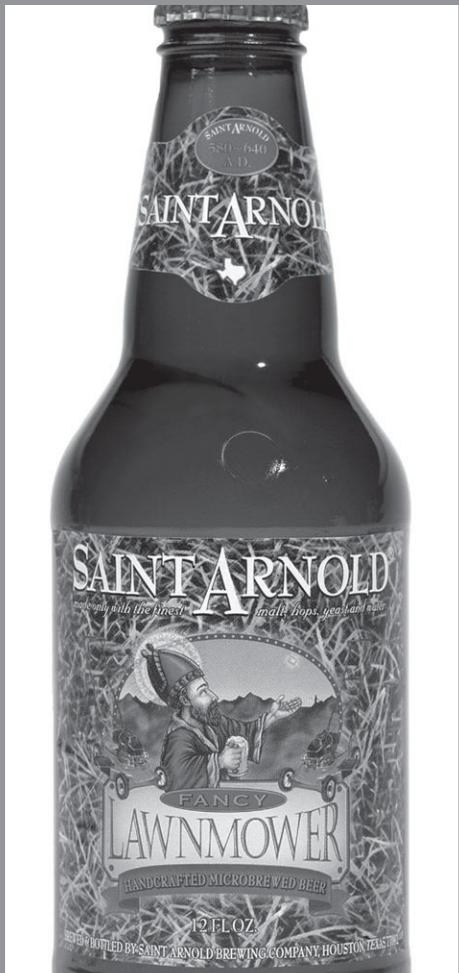
Basing initial efforts on a homebrewed Kolsch recipe, the brewery conducted tasting surveys and even sampled bottled beers brought back from Köln. "Talk about a style that has a broad range," Wagner recalls. "[Kolsch beers] go from being as insipid as Bud Light to very light-bodied beers that will take the enamel off your teeth."

The finished product is simple, made with Durst Pilsner malt with just a touch of wheat malt thrown in. The brewery tried different malts, but "the Durst Pils has an interesting taste to it," claims Wagner. "It has an almost biscuity, toasty flavor. We tried it with our domestic 2-row and it came out well, but it lacked a little character."

Nothing but Hallertauers go in for both bittering and flavor, yielding an assertively hopped beer that remains light in body but full in flavor. Here again yeast plays a significant role, with the clean fermenting Kolsch yeast giving a soft, rounded malt flavor with near-lager crispness.

The beer was an immediate success and has proven a strong competitor to Amber Ale, although the original beer continues to outsell its lighter sibling. When Houston's overheated residents reach into the fridge, they can now get a beer worth enduring the heat for.

Bev Blackwood has been brewing since 1998 and is constantly seeking to learn new things about the world of beer. He writes about Texas beers for *Southwest Brewing News* and is editor of the Foam Rangers' Brewletter Urquell. He serves as AHA liaison for the greater Houston area and is a BJCP certified judge.



Saint Arnold Fancy Lawnmower Beer Clone

Target O.G.: 1.044 (13.8° P)

Target T.G.: 1.008 (2.8° P)

Expected ABV: 5.5%

Target IBUs: 22.7

ALL-GRAIN WORT PRODUCTION

10.0 lb (5 kg) Durst Pilsner malt

1.0 lb (0.45 kg) German wheat malt

WATER TREATMENT

Add 1.67 oz. (4.72 g) of CaCl₂ for 7 gallons (26.5 L).

Mash with 4 gallons of water to achieve 150-152° F (65-66° C). Rest for one hour. Sparge with 4 to 5 gallons (15-19 L) of water to collect 5.5 to 6.5 gallons (21-25 L) of wort. (Assumptions: 5.5 gallons at end of boil, 54-percent efficiency.)

THE BOIL

Boil for 90 minutes. At 70 minutes from the end of the boil, add .66 oz. (18.7 g) of Hallertauer hops. Fifty minutes before end of boil, add another .33 oz (9.35 g) of hops. Fifteen minutes from the end of the boil add another .33 oz of hops. At the end of the boil, add a final .33 oz. of hops.

At end of boil, chill, aerate and pitch with 2565 Wyeast or WLP 029 White Labs Kolsch yeast or similar.

FERMENTATION

Ferment at 62° F (16.6° C), crash temperature and lager at 34° F (1° C) after reaching terminal gravity to aid in flocculating yeast.

BY CHARLIE PAPAZIAN

Irish Cocoa Wood Porter

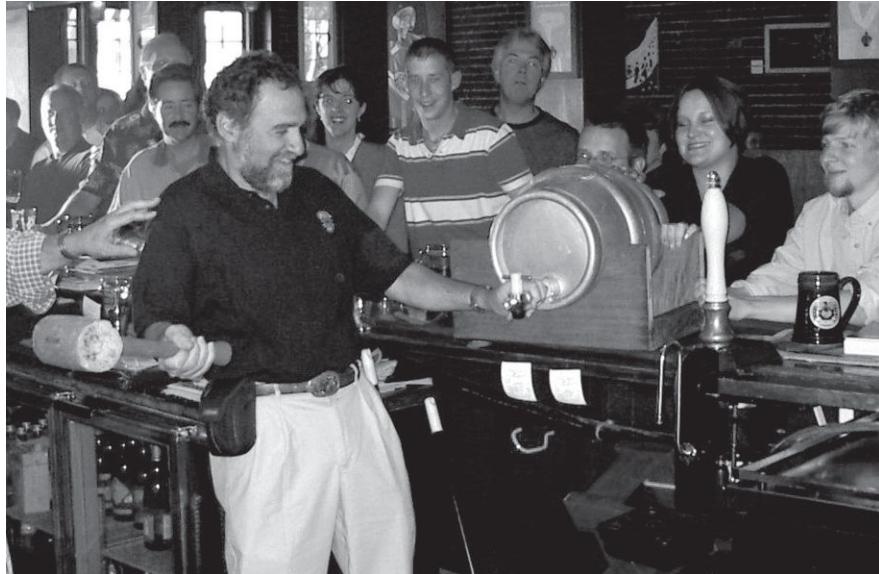
My editor Ray Daniels is chomping at the bit. This article is already three days late and he's got to get this piece into the editing chain. But I have a good excuse for being late. I've been traveling parts of the United States tasting homebrew.

Near as I can reckon, about 130 of them—homebrews, that is. Who, where, why, you ask? I've just returned from a "Completely Joyous" Association of Brewers On-the-Road expedition to Nashville, Tenn., visiting Boscos Restaurant and Brewery, Blackstone Restaurant and Brewery, Bohannon Brewing Co. and All Seasons Gardening & Brewing Supply. Great places. Great food. Great people and great homebrew. And then we went on to visit the Rocket City Homebrewers and Birmingham Masterbrewers in Huntsville, Ala. What a turnout, and what fantastic homebrews. Then on we drove to Memphis where we stopped in at Hops Restaurant Bar and Brewery and Boscos Restaurant and Brewery for a rendezvous with the Bluff City Brewers. Masterfully impressive beers at both Hops and Boscos, and of course homebrew coming out of the woodwork.

It wasn't over yet. From there we journeyed to Little Rock, Ark. to meet homebrewers and craft brewers and taste mighty fine beers at Vinos Pizza Pub and Brewery, Fermentables Homebrew and Winemakers Supply and a packed brewhouse finale at the Diamond Bear Brewing Company.

Value of Beer: Priceless

Accompanied by my wife, Sandra (who brewed her first homebrew, a Belgian Witbier, two weeks earlier), Boscos Nashville brewmaster Fred Scheer, and super host, driver and organizer of the tour Chuck Skypeck (Association of Brewers Board of Directors chairperson and owner of Boscos)—we whirled and tasted our way through this part



Charlie Papazian prepares to tap a keg of real ale at Boscos Memphis.

of the South. Make no mistake about it: here live brewers as passionate and as skilled as in any well-known beer city.

We met lots of American Homebrewers Association members along the way and enlisted 40 more, swept up in the fervor of homebrew.

One thing I always appreciate during these tours is the opportunity to taste new and classic beers. Beers brewed from recipes from my book *The Complete Joy of Homebrewing* were judged in competitions in Nashville, Memphis and Little Rock. What fun for me, tasting old favorites like Get Rio Light Lager, Rocky Raccoon's Honey Lager, Goat Scrotum Ale, Toad Spit Stout, Sparrow Hawk Porter, Armenian Imperial Stout, Who's in the Garden

Grand Cru, Buzzard Moog Double Brown Ale and, most memorably, the wondrous sparkling and refreshing Wailailale Chablis Ginger Mead and the nefarious Cock (as in "rooster") Ale.

The Cock Ale—reminiscent of spiced, malty Holiday Ale—and the Ginger Mead won respective first places. I can't forget the Armenian Imperial Stout with added oak chips—mmmm boy! There was also the ale brewed with five different breakfast cereals (perhaps inspired by Ray Daniels' column on that subject not long ago). And mead brewed with sour cherries and the Middle Eastern ingredient of *mahleb*, actually ground cherrystones that offer a wondrous aroma of cherries. My grandmother used this ingredient when making braided choereg (bread).

We met lots of American Homebrewers Association members along the way and enlisted 40 more, swept up in the fervor of homebrew. Tour sponsors Briess Malt, Party Pig/Quoin and Wyeast Labs offered a bun-

dle of products raffled off to homebrewers throughout our tour.

While I was away, things got better at home. My homebrew had a chance to age and improve for one more week. I was inspired by all those 5-gallon batches and

the skill of all of the master brewers I met along the way. Tasty indeed.

Here's a recipe I'm inspired to brew based on past variations I've deliciously concocted as Irish style stout. But this recipe has no roasted barley, just an extra accent of cocoa-flavored and aromatic malts along with a finishing touch of toasted oak chips.

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

Irish Cocoa Wood Porter (Mash Extract)

Ingredients and recipe for 5.5 U.S. gallons (21 L)

- 5.0 lb (2.3 kg) Extra light dried English malt extract (or 6 lb (2.7 kg) light malt extract syrup)
- 0.5 lb (225 g) Belgian (or other) aromatic malt
- 1.0 lb (454 g) English Crystal (15° lovibond)
- 0.5 lb (225 g) German black Caraffe malt
- 0.5 lb (225 g) English black malt
- 0.75 lb (340 g) English Chocolate malt
- 1.0 oz (28 g) 5.6% alpha UK Fuggles whole hops (5 HBU/140 MBU) 60 minute boiling
- 0.33 oz (10 g) 8.5% alpha UK Wye Northdown whole hops (2.8 HBU/78 MBU) 60 minute boiling

- 0.5 oz (14 g) 8.5% alpha UK Wye Northdown whole hops (4.3 HBU/120 MBU) 20 minute boiling
- 1.0 oz (28 g) 5.3% alpha U.S. Santiam or Tettnang hop pellets (5.3 HBU/148 MBU) 5 minutes
- 1.5 tsp (7.4 ml) gypsum (calcium sulfate) if your water has a low mineral content
- 0.25 tsp (1.2 ml) powdered Irish moss
- 2 oz (57 g) toasted oak chips
- 0.75 cup (180 ml measure) corn sugar (priming bottles) or 0.33 cups (80 ml) corn sugar for kegging
- Wyeast (#1084) Irish Ale yeast

- Target Original gravity: 1.051 (12.5° P)
- Approximate Final gravity: 1.014 – 1.018 (3.5-4.5° P)
- IBU's: about 33
- Approximate color: 48 SRM (24 EBC)
- Alcohol: 4.4% by volume

Place crushed crystal, aromatic, black, Caraffe and chocolate malts in 2 gallons (7.6 L) of 150° F (68° C) water and let steep for 30 minutes. Then strain out and rinse with 3 quarts (3 L) hot water and discard the crushed grains, reserving the approximately 2.5 gallons (9.5 L) of liquid to which you will now add malt extract, gypsum and "60 minute" hops. Boil for 40 minutes. Then add "20 minute" hops. Boil for 10 more minutes. Add Irish moss and boil for 5 minutes. Add "5 minute" hops. Boil for remaining 5 minutes. Turn off heat.

Strain out and sparge hops and direct the hot wort into a sanitized fermenter to which 2.5 gallons (9.5 L) of cold water has been added. If necessary add cold water to achieve a 5.5-gallon (21 L) batch size.

Pitch your yeast when temperature of wort is about 70° F (21° C). Once visible signs of fermentation are evident primary ferment at temperatures between 65–70° F (18–21.5° C) for about one week or when fermentation shows signs of calm and stopping. Rack from your primary to a secondary and add 2 oz of toasted oak chips. You can make your own toasted oak chips by simply putting them in a toaster oven at about 350° F (177° C) for about 4–8 minutes. If you

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have the capability "cellar" the beer at temperatures between 50–55° F (10–13° C) for 7–10 days.

Prime with sugar and bottle or keg when complete.

Irish Cocoa Wood Porter (All Grain)

Ingredients and recipe for 5.5 U.S. gallons (21 L)

Note: Because the full amount of wort is boiled better hop utilization is achieved, thus less bittering hops are needed to achieve the same bitterness as the mash-extract recipe.

- 7.0 lb (3.2 kg) English 2-row malt (Maris Otter if available)
- 0.5 lb (225 g) Belgian (or other) aromatic malt
- 1.0 lb (454 g) English Crystal (15° lovibond)
- 0.5 lb (225 g) German black Caraffe malt
- 0.5 lb (225 g) English black malt
- 0.75 lb (340 g) English Chocolate malt
- 0.5 oz (13 g) 5.6% alpha UK Fuggles whole hops (2.5 HBU/70 MBU) 60 minute boiling
- 0.33 oz (10 g) 8.5% alpha UK Wye Northdown whole hops (2.8 HBU/78 MBU) 60 minute boiling
- 0.5 oz (14 g) 8.5% alpha UK Wye Northdown whole hops (4.3 HBU/120 MBU) 20 minute boiling
- 1.0 oz (28 g) 5.3% alpha U.S. Santiam or Tettnang hop pellets (5.3 HBU/148 MBU) 5 minutes
- 1.5 tsp (7.4 ml) Gypsum (calcium sulfate) if your water has a low mineral content
- 0.25 tsp (1.2 ml) powdered Irish moss
- 2 oz (57 g) toasted oak chips
- 0.75 cup (180 ml) corn sugar (priming bottles) or 0.33 cups (80 ml) corn sugar for kegging
- Wyeast (#1084) Irish Ale yeast

- Target Original gravity: 1.051 (12.5 B)
- Approximate Final gravity: 1.014–1.018 (3.5–4.5 B)
- IBU's: about 32

- Approximate color: 48 SRM (24 EBC)
- Alcohol: 4.4% by volume

A step infusion mash is employed to mash the grains. Add 10 quarts (9.5 liters) of 150° F (65.5° C) water and gypsum to the crushed grain, stir, stabilize and hold the temperature at 132° F (53° C) for 30 minutes. Add 5 quarts (5 L) of boiling water and add heat to bring temperature up to 155° F (68° C) and hold for about 30 minutes. Then raise temperature to 167° F (75° C), lauter and sparge with 5 gallons (19 L) of 170° F (77° C) water. Collect about 6 gallons (23 L) of runoff. Add water if necessary to bring total volume to about 6 gallons (23 L) for the boil. Add "60 minute" hops, rapidura sugar and bring to a full and vigorous boil.

The total boil time will be 60 minutes. Add doses of "60 minute" hops. Boil for 40 minutes. Then add "20 minute" hops. Boil for 10 more minutes. Add Irish moss and boil for 5 minutes. Add "5 minute" hops. Boil for remaining 5 minutes. Turn off heat.

After a total wort boil of 60 minutes turn off the heat and place the pot (with cover on) in a running cold-water bath for 15 minutes. Continue to chill in this immersion or use other methods to chill your wort. Then strain and sparge the wort into a sanitized fermenter. Bring the total volume to 5.5 gallons (21 L) with additional cold water if necessary.

Pitch yeast when temperature of wort is about 70° F (21° C). Once visible signs of

fermentation are evident primary ferment at temperatures between 65–70° F (18–21.5° C) for about one week or when fermentation shows signs of calm and stopping. Rack from your primary to a secondary and add 2 oz of toasted oak chips. You can make your own toasted oak chips by simply putting them in a toaster oven at about 350° F (177° C) for about 4–8 minutes. If you have the capability "cellar" the beer at temperatures between 50–55° F (10–13° C) for 7–10 days.

Prime with sugar and bottle or keg when complete.

Charlie Papazian is founding president of the Association of Brewers.

By The Numbers

Charlie Papazian's Spring AOB On The Road

Trip covered the following:

Number of days:	4.5
Number of stops/events:	14
Number of breweries visited:	8
Number of homebrew shops:	2
Number of clubs:	5
Number of people attending events:	300
Number of homebrews sampled:	130
Number of craft beers sampled:	32
Number of miles driven:	525
Hours of sleep:	31
Miles flown:	2,300
States visited:	3
Cities visited:	4

HOMEBREW BITTERING UNITS (HBUs) are a measure of the total amount of bitterness in a given volume of beer. Homebrew Bittering Units can easily be calculated by multiplying the percent of alpha acid in the hops by the number of ounces. For example, if 2 ounces of Northern Brewer hops (9 percent alpha acid) and 3 ounces of Cascade hops (5 percent alpha acid) were used in a 10-gallon batch, the total amount of bittering units would be 33: $(2 \times 9) + (3 \times 5) = 18 + 15$. Bittering units per gallon would be 3.3 in a 10-gallon batch or 6.6 in a five-gallon batch, so it is important to note volumes whenever expressing bittering units.

INTERNATIONAL BITTERNESS UNITS (IBUs) are a measure of the bitterness of a beer in parts per million (ppm), or milligrams per liter (mg/L) of alpha acids. You can estimate the IBUs in your beer by using the following formula:

$$\text{IBU} = \frac{\text{ounces of hops} \times \% \text{ alpha acid of hop} \times \% \text{ utilization}}{\text{gallons of wort} \times 1.34}$$

Percent utilization varies because of wort gravity, boiling time, wort volume and other factors. Homebrewers get about 25 percent utilization for a full one-hour boil, about 15 percent for a 30-minute boil and about 5 percent for a 15-minute boil. As an example, 1 ounce of 6 percent alpha acid hops in five gallons of wort boiled for one hour would produce a beer with 22 IBUs:

$$\text{IBU} = \frac{1 \times 6 \times 25}{5 \times 1.34} = 22 \text{ IBUs.}$$

METRIC BITTERNESS UNITS (MBUs) are equal to the number of grams of hops multiplied by the percent alpha acid.

In this edition of Winners Circle, for your summer brewing pleasure we have a great lineup of NHC-winning recipes. Kansas City Bier Meisters' Paul Pilcher's staunchly patriotic Freedom Ale is packed with citrusy Pacific Northwest hops, done in the classic American style of the famous Sierra Nevada pale ale. But with an extract/grain bill, you won't be slaving all day in the brewery.

Hop River Brewers' Bruce Stott was so happy with his titanic Foolish Old Ale he is currently brewing an identical batch. "It was too good to hold on to," he said, and the 2002 NHC judges agreed. Brew up your own batch of Stott's winning Old Ale and see how long it lasts in your cellar.

For those with refrigeration, or access to an icy alpine cave, Cary Apex Raleigh Brewers Of Yore's Glenn Thomas' Slam Dunkel is a classic Bavarian lager right down to the decoction mash. And with a 6-gallon batch size, you should have plenty to enjoy come Oktoberfest.

Quality Ale & Fermentation Fraternity's Peter Zien and Harold Gulbransen team up to create a hybrid style they call Witwine. With a 50-50 barley to wheat malt blend, the spicy, complex character imparted by Belgian witbier yeast and an impressive original gravity of 1.086, this Weisenbock-like specialty is sure to pack a wallop.

Finally, perennial NHC medalist Joe Formanek of the Urban Knaves of Grain again returns to Winners Circle with another 5-gallon batch of Veronica's mead, this time a sweet, sparkling apple mead named Veronica's Sweet & Sultry Cyser. Formanek's clean and simple meadmaking methods continue to wow NHC judges, while the rest of us can only sit back in awe and wonder... what does he do with all that mead?

Mead/Cyser



BRONZE MEDAL

AHA 2002 NATIONAL HOMEBREW COMPETITION

Joe Formanek, Bolingbrook, Ill.

"Veronica's Sweet & Sultry Cyser"

Sweet Sparkling Cyser

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

12.0 lb (5.4 kg) soy flower honey
4.0 gallons (15 liters) Plank Road
Cider
White Labs WLP002 English ale
yeast
Bottle conditioned

- Original specific gravity: 1.128
- Final specific gravity: 1.038
- Primary fermentation: 54 days at 68° F (20° C) in glass
- Secondary fermentation: 74 days at 68° F (20° C) in glass

Brewer's Specifics

Steep must at 180° F (82° C) for one hour.

Judges' Comments

"Sweet apple notes. Some bready yeastiness. Light tannin backbone. Some acidity—maybe a little harsh. Honey rounded smoothness overall. Very nice effort. Good job!"

"Nice balance of apple and honey flavor. Sourness/acidity is a little harsh—could be toned down. Alcohol apparent in finish. Overall enjoyable."

English & Scottish Strong Ale



BRONZE MEDAL

AHA 2002 NATIONAL HOMEBREW COMPETITION

Bruce Stott, Rockville, Conn.

"Foolish Old Ale"

English & Scottish Strong Ale

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

11.0 lb (5 kg) Pilsener malt
2.0 lb (0.9 kg) Munich malt
1.0 lb (0.45 kg) aromatic malt
0.5 lb (227 g) 60° L crystal malt
0.5 lb (227 g) 90° L Scotch crystal malt
0.25 lb (113 g) Special B malt
0.25 lb (113 g) chocolate malt
2.1 oz (59 g) Northern Brewer pellet hops 8.6% alpha acid (90 min)
1.0 oz (28 g) Fuggle pellet hops 3.4% alpha acid (20-1)
1.0 tsp (5 mL) Irish moss (20 min)
Wyeast No. 1099 Whitbread ale yeast
Forced CO₂ to carbonate

- Boiling Time: 1 hour, 45 minutes
- Original specific gravity: 1.082
- Final specific gravity: 1.022
- Primary fermentation: 15 days at 72° F (22° C) in glass
- Secondary fermentation: 49 days at 68° F (20° C) in glass

Judges' Comments

N/A

Dark Lager



SILVER MEDAL

AHA 2002 NATIONAL HOMEBREW COMPETITION

Glenn Thomas, Raleigh, N.C.

"Slam Dunkel"

Dark Lager

Ingredients for 6 U.S. gallons (22.7 L)

10.0 lb (4.5 kg) Munich malt
 1.0 lb (0.45 kg) 60° L caramel malt
 1.0 oz (28 g) Hallertauer whole hops
 4% alpha acid (90 min)
 0.5 oz (14 g) Saaz whole hops 3.1%
 alpha acid (90 min)
 White Labs WLP838 Southern
 German lager yeast
 Forced CO₂ to carbonate

- Boiling Time: 90 min.
- Original specific gravity: 1.055
- Final specific gravity: 1.015
- Primary fermentation: 14 days at 55° F (13° C) in glass
- Secondary fermentation: 42 days at 38° F (3° C) in glass

Brewer's Specifics

Employ a decoction mash with final rests at 151° F (66° C) and 154° F (68° C).

Judges' Comments

"A nice Dunkel. I'd like to see a touch more malt flavor in the middle and finish. But it's fine as is."

"Good malt with some hop character in finish. Hoppiness should be much more restrained, but otherwise a very good effort."

Spice/Herb/ Vegetable Beer



SILVER MEDAL

AHA 2002 NATIONAL HOMEBREW COMPETITION

Peter Zien and Harold Gulbransen, San Diego, Calif.

"Belgian-Style Witwine"

Spice/Herb/Vegetable Beer

Ingredients for 8 U.S. gallons (30.3 L)

8.0 lb (3.63 kg) 2-row pale malt
 8.0 lb (3.63 kg) wheat malt
 1.0 oz (28 g) Czech Saaz whole hops
 4% alpha acid (90 min)
 1.0 oz (28 g) Czech Saaz whole hops
 4% alpha acid (60 min)
 0.5 oz (14 g) Czech Saaz whole hops
 4% alpha acid (30 min)
 1.0 tsp (5 mL) Irish moss (20 min)
 0.5 oz (14 g) ground coriander, in
 secondary
 0.5 oz (14 g) orange peel, in
 secondary
 White Labs WLP 400 Witbier ale
 yeast
 0.66 cups corn sugar (160 g) to
 prime

- Boiling Time: 90 min.
- Original specific gravity: 1.086
- Final specific gravity: 1.016
- Primary fermentation: 10 days at 68° F (20° C) in glass
- Secondary fermentation: 14 days at 68° F (20° C) in glass

Brewer's Specifics

Mash grains at 154° F (68° C) for 90 minutes.

Judges' Comments

"A nice beer. Very interesting concept. I'm not sure I could drink a full pint, but the characteristics of what you've described are certainly present. For better drinkability, perhaps reduce the spice/orange zing a tiny bit."

"Great idea but too bitter for a wit. [One] would expect more orange in aroma. May have fermented at too high a temperature."

American Pale Ale



SILVER MEDAL

AHA 2002 NATIONAL HOMEBREW COMPETITION

Paul Pilcher, Kansas City, Mo.

"Freedom Ale"

American Pale Ale

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

4.0 lb (1.8 kg) Alexander's pale malt
 extract syrup
 4.0 lb (1.8 kg) Munton & Fison extra
 light dry malt extract
 0.5 lb (227 g) dextrin malt
 0.5 lb (227 g) 10° L crystal malt
 0.5 lb (227 g) 20° L crystal malt
 1.5 oz (42 g) Northern Brewer pellet
 hops, 9.6% alpha acid (60 min)
 0.5 oz (14 g) Northern Brewer pellet
 hops, 3.2% alpha acid (15 min)
 0.5 oz (14 g) Cascade pellet hops,
 2.4% alpha acid (15 min)
 0.5 oz (14 g) Northern Brewer pellet
 hops, 3.2% alpha acid (1 min)
 0.5 oz (14 g) Cascade pellet hops,
 2.4% alpha acid (1 min)
 1 oz (28 g) Cascade pellet hops,
 4.8% alpha acid (dry)
 Wyeast No. 1056 American ale
 yeast or equivalent
 Forced CO₂ to carbonate

- Boiling Time: 60 min
- Original specific gravity: 1.057
- Final specific gravity: 1.014
- Primary fermentation: 7 days at 65° F (18° C) in glass
- Secondary fermentation: 21 days at 65° F (18° C) in glass
- Tertiary fermentation: 14 days at 36° F (2° C) in steel

Brewer's Specifics

Steep crushed specialty malts at 150° F (66° C) for 45 minutes. Remove grains and add malt extracts and bring to a boil.

Judges' Comments

"Hoppy, some citrus, some caramel, malty with a dry finish. A nicely hopped beer with a balanced amount of bitterness and enough malt to keep things pleasant. A good session beer."

(continued on page 50)

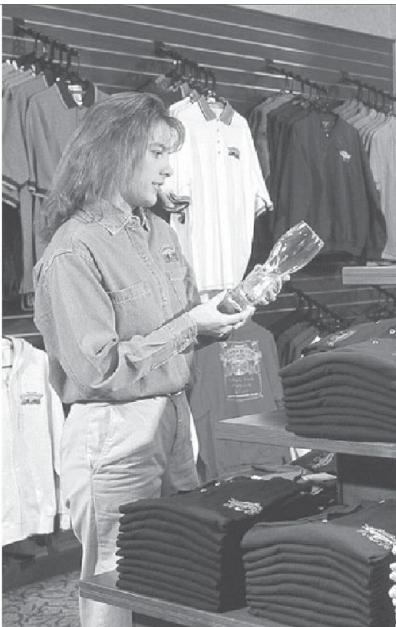


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"Very bitter and clean. Just enough hop flavor. A really good beer—very similar to SNPA. Great job!"

Former Zymurgy associate editor Amahl Turczyn still finds time to brew on weekends.

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BY PROFESSOR SURFEIT

Flemish Water Chemistry

Dear Professor,

I was recently reading Michael Jackson's *Beer Companion* about Flemish brown ale. He describes it as being made with "water high in sodium bicarbonate," and that "sodium bicarbonate in the water does make for a fluffy, soothing character." When describing Liefmans Oud Bruin he says, "The water is treated to create the special Oudenaarde character, which is low in calcium but high in sodium bicarbonate."

I was a little confused when I read that. I have only been homebrewing for a couple of years, brewing all-grain recipes for the last six months, and I thought the practice of adding sodium bicarbonate to brewing water sounded unusual. Could you discuss water chemistry as it applies to Flemish brown ales? What would be a high sodium bicarbonate level and low calcium level with regard to this style? What is the effect on mash chemistry? I thought you needed calcium for the mash and that the sodium bicarbonate would make it difficult to get mash pH in the optimum range. Please help. I'd like to try to make something like Liefmans Goudenband but wanted to understand the role of water chemistry in this style first.

Thanks,

Ray Lewis

Dear Ray,

This is one question I couldn't answer by myself so I asked for help from brewers, professors and homebrewers around the world. Here's a reply I received from Professor Denis De Keukeleire of Ghent University:

"It took a long time before I got the answer on your question related to Flemish brown ale. When the beer was brewed some time ago in the Liefmans brewery, the well water was indeed very rich in salts including high lev-



els of sodium bicarbonate. This non-corrected water on its own is not favorable for wort preparation because of its alkaline nature. The use of dark-colored malts will have influenced the pH favorably due to the presence of melanoidins thereby partially or fully neutralizing the bicarbonate. Concentrations of sodium ions above 150 mg/l lead to salty and sourish perceptions. Currently, not much is done to treat the water except that a low concentration of calcium ions is added."

Best regards,

Denis

of calcium to ensure the formation of beer stone (calcium oxalate) in the brewery rather than in the package, where it can lead to gushing problems. This probably won't be as much of a concern to a homebrewer. If the first bottle of a batch gushes a bit, they learn to be careful opening the rest!"

Dana Johnson of Birko Products referred me to a Web site that reminded me that bicarbonates are eliminated by boiling and reduced by heating. Without these reducing reactions it reduces fermentability of wort possibly contributing to a sweeter, fuller beer.

Jeff Renner steered me toward an old posting on the Homebrew Digest that charted:

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<i>Mg</i>	22	10
<i>Na</i>	52	125
<i>SO₄</i>	76	145
<i>Cl</i>	47	139
<i>HCO₃</i>	306	370
<i>Hardness</i>	424	238

Well, Ray, there is hope. All this information should get you thinking along the lines of "what the...?" Like e.e. cummings once wrote, "Always the beautiful answer that asks more questions."

Coming or going,
The Professor, Hb.D.

Hiccups, Belches and Dioramas

Here's a gem taken from the Glacier Brewhouse's HOPS newsletter in Anchorage, Alaska:

Dear Foamy,

I faithfully read **Zymurgy** and I wonder about "The Professor," who always signs his responses with "Hb.D." Are these his qualifications? Do they stand for Have Been Drinking? Hairy-Balled Duck? Henrietta Bean's Dowry? Havey Brewthing Dammit?

Unsigned

Dear Unsigned,

You have a valid question. One can only assume that this set of letters indeed reflects his qualifications. Unfortunately, despite intense research I am still uncertain as to just what they mean. So I asked my psychic cat Myrna. And though the spirits were unwilling to part with this information, she suggests that they may mean that the Professor has a doctorate in heavy-beers. Remember that in some of the doctoral degrees the "D" comes after what the degree is in (PhD, LL.D etc). Now Myrna, despite her vast store of knowledge, may be in error. If so, I apologize to the Professor (if he ever reads my column) and would encourage him to correct any inaccuracies by writing to me at askfoamy@yahoo.com. While I'm waiting, I'm

gonna find a drink.

Foamy
Mootes' Toog Brewing Company
Glacier Brewhouse
Anchorage, Alaska

Dear Myrna and Foamy,

I think that correcting any inaccuracies would hinder your drinking of good beer (and I know there is plenty of great stuff at the Glacier Brewhouse!). So I'm going to beg off answering this question for now, unless I get inundated with threats of boycotting my column or the possibility of not getting reelected as Professor. So here's to your contemplations and your appreciated concerns.

Qualified but not quantified,
The Professor, Hb.D.

Retro Gas

Dear Professor,

Our friendly supplier of beer gas and

CO₂ filled our tank with beer gas instead of CO₂ last time. We keg and then bottle using a CO₂ counter pressure-bottling system. Can we use the beer gas with nitrogen plus CO₂ for carbonating our 5-gallon keg? What about for counter pressure bottling—is this OK for purging the bottle of oxygen prior to introduction of the keg beer and for beer delivery into the bottle?

Hoppily brewing in Hawaii,
Cindy and Wayne

Dear Cindy and Wayne,

The beer gas is fine for purging. You could "carbonate" with the beer gas, but you'll find that the nitrogen part of the gas will be more difficult to dissolve into your beer. You might need more pressure. But the laws of physics, if I remember them correctly, are that the CO₂ will be dissolved quite adequately. The bottom line is trying it out. If it works, go for it. If it doesn't work,

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it'll be only a matter of degree, but you won't ruin the beer.

Take note that the nitrogen will give the beer a different character—taste wise and bubble wise. Many people love the character that nitro gives.

Okole Dokole,
The Professor, Hb.D.

All I Wanted Was My Two Front Teeth

Dear Michael Jackson,

Hello! I asked for a homebrew kit for Christmas and got it!

Now that I finally brewed my first batch of beer, the color seems off. I made Pilsner Urquell. I added 2 gallons of water, added specialty crystal grains, brought up to 155° F for 30 minutes, then steeped for a final 10 minutes. The whole process took about 65 minutes. I initially put into a plastic fermenter then to a glass carboy. The recipe says it should be bright gold in color. My brew is brown, if not medium/dark brown. What happened to the color and what effect will it have on the final product?

Joe Buck

Dear Joe,

Michael Jackson asked that I reply to your question, since we're the experts on home-

brewing. Adding crystal malt surely darkened your "Pilsener." When brewing this style use the lightest malts you can find. If you use any grains at all, I'd suggest dextrine malts or aromatic malts not to exceed half a pound total. The crystal malt was probably included to lend a caramel-like character to the beer and unfortunately it also adds color. I hope this helps.

Lightly touched,
The Professor, Hb.D

Stoned Aeration

Dear Professor,

I have been brewing now for more than 13 years. I graduated to all-grain five years ago and built my own RIMS system.

My question is about aeration. While trying to increase my yield and ensure proper conditions for yeast, I recently purchased an assembled aeration system that includes a manifold, aeration stone, temperature probe, filter and air pump. I am flowing my cooled wort through the manifold and aerating. The problem I have encountered is excessive foam into the primary fermenter, which creates a mess and is a concern for sanitation.

Should I decrease the airflow? Is the manifold restriction the issue? Any help would be appreciated.

Enjoying a homebrew,
Scott Gemberling

Dear Scott,

It's a nice problem to have. What I would do if I were you is stop the flow at various points. Seal your carboy and give it a gentle shaking. This should reduce a lot of the really fluffy foam. When reduced, continue to add your wort. I usually put 5 to 5.5 gallons in a 6.5-gallon carboy, so I just barely avoid this "problem." But isn't it great that you're getting that much aeration?

Beers manyfolds,
The Professor, Hb.D



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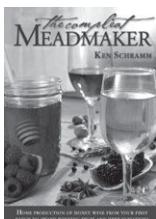
Hey homebrewers! If you have a brewing-related question for Professor Surfeit, send it to "Dear Professor," PO Box 1679, Boulder CO 80306-1679; fax 303-447-2825 or e-mail professor@aoe.org.

BREW NEWS

BY RAY DANIELS

The Compleat Meadmaker Debuts

Master meadmaker Ken Schramm shares his secrets in the recently published



Brewers Publications book, *The Compleat Meadmaker*. Schramm has been making and judging meads for more than a dozen years, winning many awards and twice being selected to brew the commemorative mead for the AHA National Homebrew Conference.

The Compleat Meadmaker begins with basic mead making techniques before covering alternative methods and moving on to more advanced topics. Schramm gives detailed attention to the properties of honey, including an analysis of varietal honeys by source, and also addresses conditioning and aging issues such as the use of oak barrels for making mead. In later chapters, Schramm deals with a wide range of flavorful additions to mead including grapes, other fruits, spices and herbs, and a wide range of malts.

The book sells for \$19.95 and is available by calling the Association of Brewers at 1-888-822-6273.

Papazian Receives Lifetime Achievement Award

In May, the Association of Brewers recognized the contributions of founder Charlie Papazian during the Craft Brewers Conference in New Orleans by awarding him a Lifetime Achievement Award. This year marks the 25th anniversary of the Association—founded by Papazian as the American Homebrewers Association in 1978. Not long after its founding, the AHA began coverage of the rapidly emerging microbrewery movement and soon created a specific division to serve those homebrewers who were turn-

ing pro. This spring's Craft Brewers Conference was the 20th such meeting put on by the Association of Brewers.

The award was a surprise to Papazian who is normally privy to the identity of honorees for such awards well in advance, but in this case the Association of Brewers board of directors managed to approve the award without his knowledge. When the award was announced, it drew an immediate standing ovation from the 700 brewers and allied trade members gathered for the grand banquet of the conference.

"Without Charlie, none of us would be here this week and many of us wouldn't be in this business," said AOB board of directors chairman Chuck Skyeck. "It was his vision and his determination that helped create this industry and we all owe him a debt of gratitude."

Others honored at the annual banquet include Mary Anne Gruber, who is retiring after more than 30 years at Briess Malting; industry analyst Robert Weinberg, who has charted trends and predicted futures for the industry since its inception; and Southampton Publik House brewer Phil Markowski, who received the Russell Schehrer Award for Innovation in Craft Brewing.

Dogfish Head, Stone, Victory Unite for BUFF

CEOs Sam Calagione of Dogfish Head Craft Brewery, Greg Koch of Stone Brewing Co. and Bill Covaleski of Victory Brewing Co. are taking a stand against "watery, adjunct-laden beer" by forming BUFF, Brewers United for Freedom of Flavor.

The trio, calling themselves the Three



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Beer-Men of the Apocalypse, staged a "protest" on May 23, the day before the Art of Beer Festival in Boston. They selected Marty's Fine Foods in Boston for their "multimedia" presentation (code word for beer samples and fine food, according to the press release).

"If you ordered filet mignon in a restaurant and they brought you a processed soy-burger, you'd be justifiably outraged. I mean, where's the beef?"

asks Calagione. "Yet every year breweries are adding more adjunct corn and rice filler into their products in place of the traditional barley and hops, all the while convincing consumers that a bland product is the ideal. It's criminally tragic."

The trio, whose breweries are all experiencing double-digit growth, planned to "rally under the BUFF banner and flex their verbal muscles in a no-holds-barred



attack on mindless video-drone beer attitudes," says the press release.

"Beer is supposed to be an interactive thing of beauty and pleasure," said Covaleski. "We don't see how the lack of taste is a goal to be chased and lauded."



Morimoto Rocks with Rogue

Chef Masaharu Morimoto of "Iron Chef" fame has teamed up with Rogue Ales brewmaster John Maier to help change the way gourmet chefs and five-star foodies think about beer. To get the ball rolling, they recently released two special beers: Morimoto Soba Ale and Morimoto Hazelnut Ale.

Rogue's Maier has been breaking the rules of commercial brewing for many years, using ingredients such as chocolate, coriander, honey, chipotle peppers and juniper berries. Like Maier, Morimoto is a rogue who refuses to go by the book. He sweetens without sugar, mixes without bowls and

fries without flames—a real mess hall Mac-Gyver. Such innovation has made him an international star through appearances on the Food Network's "Iron Chef."

Working together, they have settled on two beers that can assert the rightful place of beer on wine lists and in white-tablecloth restaurants.

Rogue Ales rolled out the two new beers to test markets in May in their traditional silk-screened 22-ounce bottles featuring Morimoto's likeness.



Alaskan Brewing Expands, Exports

Alaskan Brewing Company recently installed two new fermenters to help it meet growing demand for its products in the Pacific Northwest—and England! The fermenters are slightly larger than normal homebrew batch size at 400 barrels and 1,300 barrels (that's 12,400 gallons and 40,300 gallons respectively). Assuming stan-

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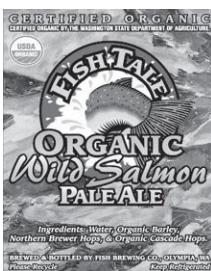


dard industry turnover of 26 brews per year, the new tanks will allow Alaskan to make about 44,000 more barrels each year—a better than 50 percent increase over its 2002 production of 76,100 barrels.

And if the English turn out to have a hankering for smoked porter, they may need all that extra capacity sooner rather than later. In March, the brewery released its limited edition Smoked Porter in England at the request of a U.K. retailing group. While Smoked Porter is only made in limited amounts once a year, the beer has won awards far and wide, including 11 Great American Beer Festival medals and two medals at the Brewing Industry International Awards in Burton-upon-Trent, England.

Next Organic Beer for Fish Tale: Wild Salmon

Fish Brewing Company of Olympia, Wash. announced the release of Fish Tale Wild Salmon Organic Pale Ale, the brewer's latest certified organic product. Wild Salmon



Organic Pale Ale joins Fish Tale Organic Amber Ale and Fish Tale Organic India Pale Ale as the first beers to have received the new USDA Organic

Certification. These three year-round products have been certified organic by the Washington State Department of Agriculture, and are the first beers to be in full compliance with the standards of the USDA's new National Organic Program.

"We feel that going organic has been the best possible choice for our Company and our customers," said Crayne Horton, founder of Fish Brewing. "We've made a clear commitment to environmental protection, and that decision has made Fish Brewing a stronger company financially, a better place for its employees to work, and a better choice for environmentally conscious consumers. Brewing and selling organic beer has been a win/win situation for all of us."

Wild Salmon Organic Pale Ale is brewed using the first crop of commercially available hops to be grown in the United States

under certified organic conditions. Wild Salmon is brewed with certified organic Cascade hops grown in Yakima, Wash. Since Wild Salmon Pale Ale was originally brewed with Yakima Cascade hops, the new organic version will not have to significantly change its flavor profile using the organic hops.

Alaskan Brewing Brings Home Four Gold Medals

Alaskan Brewing Company won four gold medals for excellence and a Best in Class at the Australian International Brewing Awards 2003 in early May in Melbourne.

Alaskan Pale, Stout and ESB each won a gold medal, and the brewery's famous Smoked Porter won gold along with Best in Class for International Experimental Beers.

"This is very exciting for us, especially since it was our first time to enter this competition," said quality assurance analyst Heather Conlin. The competition represented 22 countries and more than 80 breweries.

Alaskan, based in Juneau, distributes its award-winning beers and ales in Alaska, Washington, Oregon, Idaho, Montana, Wyoming, Nevada and northern California. Founded in 1986, it is the oldest operating brewery in Alaska.

Stevens Point Expands Midwest Market

Stevens Point Brewery in Wisconsin announced the expansion of its distribution markets to include Kansas, Missouri, Iowa and Ohio.

In the second quarter of 2003, Kansas and Missouri were the first states outside of Wisconsin to receive Point Special Lager, Point Classic Amber and Point White Biere. Iowa and Ohio will receive the shipments in the third quarter.

"We are receiving great feedback on our products from Kansas and Missouri consumers," said Joe Martino, operating partner of Stevens Point.

Stevens Point has partnered with Glazer's, one of the nation's largest alcoholic beverage distributors. The brewery is one of the oldest in the country, founded in 1857.

Ray Daniels is editor-in-chief of *Zymurgy* magazine.



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Last Drop (from page 64) at the "bottom" of the suitcase (the side opposite the handle used to carry it). T-shirts can be used as wrapping, bundling two or three bottles together in one shirt. Pants are ideal for padding around the outer edges and for separating layers of beers. Shoes make good "edge" cushions because they have hard soles to protect but also are flexible enough to give when hit. Just be sure the "soft" side is oriented toward the beer. If you get a box when you buy the beer, or even if you have six-pack holders, these can be used to divide layers (with padding between, of course) of beer so you can double layer. If you have a lot of cardboard, use a cardboard sheet as the outermost layer on the big sides of the suitcase to help distribute the load from impacts.

Once the suitcase is packed, close it and test it a bit. Push on the exterior, feeling for bottles. If you can feel any, they are not padded enough. Move it around, push it over, shake it a bit and listen for glass on glass. Then re-open it to check and see if your bottles have moved much (without actually unpacking them, preferably.) Ideally, they will all be where you left them!

Your last step is a hard one. Leave the suitcase unlocked. The suitcase will be inspected, so don't make things hard for them. Also be aware of how heavy your suitcase is. These days, airlines can and will charge for bags in excess of 50 pounds.

Packing beer for shipping is actually kind of fun, sort of like putting together a puzzle. Best of all successfully completing this puzzle gets you a flavorful prize when you get home!

Bev Blackwood has successfully traveled the globe bringing back beers and single malt scotch in his checked baggage. To date he has lost only a single can of beer in his travels and has been charged for overweight (85 pounds!) baggage only once. His most unique piece of carry-on luggage was a cold case of Saint Arnold beer that thankfully fit in the overhead compartment.



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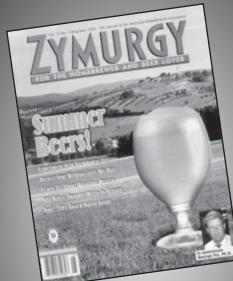
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Harvesting Beer From Far Off Lands

Beer hunting. It's both an art and a science. Finding the best selections to return home with is tough enough, but it doesn't end there. You still have to get your treasures home, sometimes in very challenging circumstances.

As in any successful effort, you begin with assessing your resources and doing a bit of research. Will

you have your own car? If so, then any place within driving distance is fair game.

If you're on foot or have to rely on public transportation you'll want to focus on retailers near your accommodations or near a transit line. Once you know your range, then you have to find the best beer stores within it, ones that offer the best regional selection and hopefully a few rarities as well. The Usenet group *rec.food.drink.beer* (*rfdb*) is an excellent resource. Invariably there is at least one person who can tell you where to go (in the beer shopping sense, that is.)

The more specific you can be about what you're looking for, the more accurate their advice usually is. Once you have an idea of your shopping options, you can call ahead, browse a Web site or e-mail the store to get an idea of what they have that might interest you. If you feel confident that you'll be meeting a great source for beer, be sure to take along some local "jewels" they can't get or some of your homebrew to establish that brother (or sister) hood that only free beer can create. Sometimes that will get you the "private stock" offerings that don't reside on the shelf.

Planning for the return starts at home. If beer buying is planned, take twice the luggage volume of what you expect you'll need

for the trip (the longer the trip, the harder this is) and try to bring a few extra T-shirts or sweatshirts for padding your purchases. A great tactic is to "nest" bags one inside the other or to take along a collapsible bag (or two) for extra space on the trip back.

If a store has a beer specialist, ask

for his or her recommendations

and be sure to ask if there's any

stock that's not on the shelf.

Be sure to plan your shopping trip. Often trips have so much scheduled into them, you're left with little free time. If you're going to be poring over an extensive selection of beers you may not know very well, be sure to allow adequate time for choosing what you want. Rushing into the store and grabbing the first three six-packs you're unfamiliar with invariably yields some disappointing beer. If a store has a beer specialist, ask for his or her recommendations and be sure to ask if there's any stock that's not on the shelf. In the best beer stores, the person running the beer section is often as excited about beer as you are. Establishing a rapport will help you to get the best beers and often provide a good contact for getting great beers in the future.

Once you've made your choices, then you are faced with getting them safely back home. Often the first step is the hardest, getting them back to your hotel. Tempting as it may be, remember not to buy more than you can safely carry, especially if you're using public transportation.

Packing for the trip home, your first goal is to protect the beer. These days, carrying bottles in your airline carry-on luggage is far

more problematic than in the past. While



not expressly forbidden, the variations in security policy from location to location could cost

you some choice brews if you choose to put them in your hand luggage. This leaves breakable glass in checked baggage, a recipe for disaster. The important thing to remember in packing is to avoid glass-to-glass contact between bottles (or other hard objects) and that all the clothing you're packing it in is at risk for soaking and damage no matter how careful you are. Ziploc bags can help protect clothes if you're worried about breakage. Always be aware of how much distance is between your bottles and the side of the suitcase in every dimension. Your goal is to have a nest of padded bottles (each bottle surrounded by some kind of padding) in the very center of the suitcase, with at least one layer of flexible material (clothes, shoes, soft souvenirs) between them and the outer wall.

Your bag should also be packed tight enough so that bottles won't migrate vertically. Orient all the bottles with the tops all in one direction, with the tops toward the (probable) top of the suitcase. The bottoms of the bottles are designed for impacts. However, remember that your bag is subject to being tumbled to any orientation.

Clothing makes ideal padding. A layer of padding across the bottom of your bag, (flat side toward the floor) can be a pair of jeans or two or a sweatshirt folded in two, as a first layer. Use socks as bottle wrapping (putting bottles in the socks, folding the top part over the bottle for a second layer) and then line them up starting (continued on page 58)



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- Chicago Pizza/BJ's Restaurant
Bar & Brewery
Arcadia, Balboa, Belmont Shore, Brea, Burbank,
Cupertino, Huntington Beach (2 locations), Irvine,
Laguna Beach,
La Jolla, La Mesa, Oxnard, Seal Beach, Valencia,
West Covina, Westlake Village, Westwood,
Woodland Hills

Oggi's Pizza & Brewing Co.
San Diego (Mission Valley, Caramel Mountain
Ranch, Del Mar) Encinitas, Escondido, Huntington
Beach, Mission Viejo, Santa Clarita, Vista

Rock Bottom Restaurants
Irvine, La Jolla, Long Beach,
San Jose, San Diego

Santa Barbara Brewing Co.
Santa Barbara

Stone Brewing Company
San Marcos

COLORADO

Backcountry Brewery & Restaraunt
Frisco

Chicago Pizza/BJ's Restaurant
Bar & Brewery

Flying Dog Brewery
Denver

Hops Restaurant, Bar & Brewery
Aurora, Colorado Springs,
Denver, Golden, Littleton,
Lone Tree, North Glenn

Glenwood Canyon Brewing Co.
Glenwood Springs

Great Divide Brewing Company
Denver

Ironworks Brewery & Pub
Lakewood

Odell Brewing Company
Fort Collins

Oskar Blues
Lyons

Phantom Canyon
Colorado Springs

Redfish Brewpub
Boulder

Redstone Meadery
Boulder

Rock Bottom Restaurants
(includes Walnut Brewery
and ChopHouse & Brewery)
Boulder, Denver (3 locations), Westminster

Rockies Brewpub
Boulder

Rockyard Brewing Company
Castle Rock

Wynkoop Brewing Company
Denver

CONNECTICUT

Hops Restaurant, Bar & Brewery
Manchester, Newington, Waterbury

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Willimantic

DELAWARE

Iron Hill Brewery and Restaurant
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West Palm Beach, Winter Park

The Snug Pub at the Dunedin Brewery
Dunedin

GEORGIA

Hops Restaurant, Bar & Brewery
Alpharetta, Douglasville, Duluth (2 locations),
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Kona Brewing Co
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Des Moines

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Ellicottville

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Lake Placid

Lake Placid Craft Brewing Co.
Plattsburgh

Southampton Publick House
Southampton

NORTH CAROLINA

Hops Restaurant, Bar & Brewery
Charlotte, Huntersville, Matthews, Pineville

OHIO

Hops Restaurant, Bar & Brewery
Beavercreek, Columbus (2 locations), Maumee

Rock Bottom Restaurants
(includes ChopHouse & Brewery)
Cincinnati, Cleveland (2 locations)

Willoughby Brewing Company
Willoughby

OREGON

Chicago Pizza/BJ's Restaurant
Bar & Brewery
Portland (3 locations), Eugene

Pelican Pub and Brewery
Pacific City

Port Halling Brewing Company
Gresham

Rock Bottom Restaurants
Portland

Rogue Ales Public House
(includes Brewer's on the Bay)
Newport (2 locations), Portland

PENNSYLVANIA

Barley Creek Brewing Co.
Tannersville

Iron Hill Brewery and Restaurant
West Chester, Media

Rock Bottom Restaurants
King of Prussia, Pittsburgh

RHODE ISLAND

Hops Restaurant, Bar & Brewery
Warwick

SOUTH CAROLINA

Hops Restaurant, Bar & Brewery
Columbia (2 locations),
N. Charleston, Spartanburg

TENNESSEE

Boscos Brewing Company
Germantown, Memphis, Nashville

Hops Restaurant, Bar & Brewery
Chattanooga, Knoxville, Memphis

TEXAS

Chicago Pizza/BJ's Restaurant
Bar & Brewery
Lewisville

Utah Squatter's Pub Brewery
Salt Lake City

VIRGINIA

Hops Restaurant, Bar & Brewery
Alexandria, Richmond (2 locations)

Rock Bottom Restaurants
Arlington

Williamsburg Brewing Co.
Williamsburg

WASHINGTON

Rock Bottom Restaurants
Bellevue, Seattle

Rogue Ales Public House
(includes Issaquah Brew House)
Issaquah

WASHINGTON D.C.

Rock Bottom Restaurants
(includes ChopHouse & Brewery)

WISCONSIN

Angelic Brewing Co
Madison

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Milwaukee

WYOMING

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