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The Journal of the American Homebrewers Association®



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# 45

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Weisse

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LAGERS

Piñon  
Porter

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# THE GEAR YOU LOVED AT HOMEBREWCON

HomebrewCon 2018 was a BLAST and we're thankful for the numbers of you who came by our booth to express how much you enjoy our products and how well they have been working for you over the years. Below is just a small collection of what we showed off on the show floor as well as some fan favorites. Visit CMBecker.com for more information or find our products at your favorite online or local supply shop!

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# Time to Brew

**A**utumn means different things to different people. The return of the academic year sees students and teachers dust off textbooks and awaken sluggish brains. Devotees of gridiron football rejoice as they worship once again at the altar of the uprights. Leaf peepers flock to New England in droves to witness nature's annual deciduous display, even as roasting drums across the American Southwest come to life with the heady aroma of charred chile.

Autumn means different things to different people. But for me, autumn means it's time to brew.

I brewed my first beer kit in September 2009 and cracked upon the first bottle the following October. Since then, I have intimately associated fall with brewing.

I eagerly await the Northern Hemisphere hop harvest and look forward to toying with a new variety or helping myself to freshies from a friend whose thumbs are far greener than mine. I anticipate the holidays and consider what I might brew now to serve then.

But that seasonal brewing connection transcends mere personal nostalgia. Lots of us fire up the brew kettle this time of year.

The weather tends to be more favorable for one thing. Sandwiched between too-hot-to-stand-near-the-kettle summer and OMG-the-pump-is-frozen winter, autumn is perhaps the finest time of year to make beer outside. If you brew indoors, it's a great opportunity to open the windows.

Those cooler days also offer more leeway with fermentation. Go ahead and ferment at room temperature—it'll be fine.

It's cool, yes, but not too cold, which makes it all too easy to throw a rack

of ribs on to smoke while you brew. Periodically inhale the vapors from both.

Days may be getting shorter, but there's still plenty of light; you can wrap things up before sunset, even if you slept in.

Annual beer celebrations like Oktoberfest and the Great American Beer Festival® whet the appetite and inspire us to try something new (or old).

The fall harvest yields countless goodies ripe for fermentation. From cranberries to pumpkins (ignore the haters), fermentable botanicals are just begging to be beer.

If cider and perry are more your thing (or also your thing), you'll no doubt already have plans to press some fruit.

This issue of *Zymurgy* offers you plenty of fodder for fall. There are, of course, 33 award-winning recipes from the National Homebrew Competition, which is reason enough to celebrate under any circumstances. But you'll also find several excellent historical lager recipes and a whole host of tart, fruity Florida weisse.

If you happen to live in the American West and have access to fresh piñon, you might try your hand at Heather Linderfelt's porter and wee heavy recipes that make use of this distinctive seed.

I can't promise that the beer you brew this fall will be any maltier, hoppier, tarter, boozier, or better than anything you brew some other time. But I can virtually guarantee it'll be memorable.

Autumn's almost here. It's time to brew.

**Dave Carpenter is editor-in-chief of *Zymurgy*.**



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Looking for something new to brew? We've got 33 recipes that took gold medals at the National Homebrew Competition in Portland. Get on it!

*By Amahl Turczyn*



### Imperial Pilsner

It's getting cooler. If your hop garden has given an especially good yield, the time is right to brew a double-strength Pilsner.

*By Steve Ruch*

To read this special online feature, go to [HomebrewersAssociation.org/sol18](http://HomebrewersAssociation.org/sol18)

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Find these homebrewing recipes and more on our website @ [HomebrewersAssociation.org/homebrew-recipes](http://HomebrewersAssociation.org/homebrew-recipes)



## >> GET THERE! BREWING UP TEXAS

Zymurgy's editor-in-chief grew up in Texas, so he retains a deep-rooted affinity for Tex-Mex, Blue Bell ice cream, and air conditioners that go to 11.

Those who hail from beyond the Lone Star State are sometimes surprised to learn that Texas history, which is famously rich with larger-than-life personalities, includes a good deal of German and Czech influence. In the mid-1800s, boatloads of immigrants from central Europe made their way to Texas, bringing with them their customs, food, and, of course, beer.

Brewing Up Texas, a temporary exhibit at The University of Texas at San Antonio Institute of Texan Cultures, chronicles the history of beer in Texas from the influence of those immigrants, through the failure of Prohibition, all the way to today's craft beer renaissance. Historical photos, old bottles, and nostalgic advertisements help bring the story to life.

The exhibit is guest-curated by beer writer Travis Poling, co-author of *San Antonio Beer: Alamo City History by the Pint*. Brewing Up Texas runs through October 28.

To learn more, visit [texancultures.com](http://texancultures.com).

(Thanks to Zymurgy reader Nick Taylor of Nederland, Colo., for the tip!)



**September 8**  
**Albuquerque Hopfest**  
Albuquerque, NM  
[albuquerquehopfest.com](http://albuquerquehopfest.com)

**September 8–9**  
**OctFest**  
New York, NY  
[octfest.co](http://octfest.co)

**September 14–16**  
**Telluride Blues & Brews Festival**  
Telluride, CO  
[tellurideblues.com](http://tellurideblues.com)

**September 20–22**  
**Great American Beer Festival®**  
Denver, CO  
[greatamericanbeerfestival.com](http://greatamericanbeerfestival.com)

**September 21–23**  
**Fremont Oktoberfest**  
Seattle, WA  
[fremontoktoberfest.com](http://fremontoktoberfest.com)

**September 22**  
**San Diego Festival of Beer**  
San Diego, CA  
[sdbeefest.org](http://sdbeefest.org)

**October 6**  
**Mass Fermentational**  
Worcester, MA  
[massbrewersguild.org](http://massbrewersguild.org)

**October 18–19**  
**PAIRED® L.A.**  
Los Angeles, CA  
[pairedla.com](http://pairedla.com)

**October 13**  
**Chicago Rare and Wild Beer Fest**  
Chicago, IL  
[rareandwildbeerfest.com](http://rareandwildbeerfest.com)

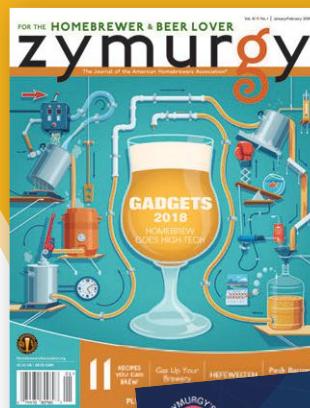
**October 26–27**  
**Strasbourg Craft Beer Festival**  
Strasbourg, France  
[strasbourgcraftbeefestival.fr](http://strasbourgcraftbeefestival.fr)

For more craft brewing events, go to [CraftBeer.com](http://CraftBeer.com)

## >> HOMEREW NEWS: ZYMURGY'S 13TH ANNUAL GADGETS ISSUE

Hey homebrewers! It's time for *Zymurgy*'s 13th annual Gadgets issue (January/February 2019)! Have you created your own brewing equipment or tweaked your existing equipment to make your brew day easier? Or have you discovered a brewing-related use for a common (or not so common) household item?

If so, please upload a description of your gadget along with high-resolution photos at [HomebrewersAssociation.org/gadgets-submission](https://HomebrewersAssociation.org/gadgets-submission). Please include your city and state (or country!), and, if relevant, your homebrew club. Submissions are due by October 22. Thanks in advance for helping us make the 13th annual Gadgets issue the best ever!



BEER QUOTE

*"The sacred  
pint alone  
can unbind the  
tongue of Dedalus."*

—Buck Mulligan,  
James Joyce's Ulysses



## >> GREAT PRODUCT SPIRITIZED SPIRALS

If you have an itch to barrel age but no actual barrels with which to scratch it, you might opt for any number of wood products—chips, cubes, honeycombs, spirals, etc.—to add to secondary. That wood usually comes unflavored, so if you want spirits character in your beer, you either need to add firewater directly to the fermenter (illegal for pro brewers but homebrewers can do as we like), or you might opt to pre-soak your barrel alternative of choice in booze before dropping it in for aging.

Innovative Oak in St. Cloud, Minn. recently announced a new product, Spiritized Spirals, that delivers great spirits character right out of the box. Innovative Oak infuses spirits into oak spirals from The Barrel Mill in Avon, Minn. These toasted, infused spirals are then packaged, sealed, and ready to add to your carboy or keg: no soaking required. Spirals are currently available in five different woods, four different toasts, and one char level. Bourbon, rye, Scotch whisky, cognac, brandy, and tequila are all available, so you're spoiled for choice.

Although pro brewers form the target audience for Spiritized Spirals, it's easy enough to place an order and split the goods with your club. Or, if you prefer, get out a hacksaw and break them up into pieces all for yourself. Prices vary, but plan on 75 cents to \$1.50 per gallon of beer treated, depending on wood, toast, and spirit variety.

For more information, check out [innovativeoak.com](http://innovativeoak.com).

Photos courtesy of Spiritized Spirals



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By Gary Glass



# Senate Resolution Recognizes AHA's 40th Anniversary

**O**n June 28, just minutes prior to Charlie Papazian's taking the stage to deliver the keynote address at the 40th annual Homebrew Con in Portland, Ore., we got word that the United States Senate had unanimously passed a resolution recognizing the upcoming 40th anniversary of the founding of the American Homebrewers Association.

Sponsored by Senator Ben Cardin (D-MD) and cosponsors Senator Susan Collins (R-ME), Senator Ron Wyden (D-OR), Senator Cory Gardner (R-CO), and Senator Michael Bennet (D-CO), Senate Resolution 576 brought a rare moment of non-partisanship to the nation's capital in honoring the AHA's 40 years of promoting homebrewing.

Special thanks go to AHA member Gray Maxwell, who works in Senator Cardin's office, for his help in making this resolution a reality. (Check out Dear Zymurgy in the March/April 2018 issue to see pictures of Gray's brew cat Rocky.)

## Homebrew Con

With more than 3,200 attendees, Homebrew Con 2018 in Portland, Ore., ranks as the second-highest-attended conference in AHA history. It was great to see so many AHA members there. The highlight for me this year was AHA founder Charlie Papazian's moving keynote address.

We video recorded the keynote and educational sessions, which are now available for all AHA members to view. Check out the Seminars page under the How to Brew Beer tab on [HomebrewersAssociation.org](https://HomebrewersAssociation.org)



## National Homebrew Competition

At Homebrew Con, 1,142 National Homebrew Competition (NHC) final-round entries were judged. The final-round entries had previously won first, second, or third place among the 8,405 entries spread across 33 NHC categories judged at 12 different first-round judge centers. The winners of the 99 medals awarded in the final round of the competition can take pride in knowing they are among the best of the best in homebrewing. Find all the gold medal-winning recipes from the 2018 competition in this issue of Zymurgy. Gold



medal-winning recipes from previous NHCs are available exclusively to AHA members via the Brew Guru® app and on HomebrewersAssociation.org.

### AHA Governing Committee Recognition Award

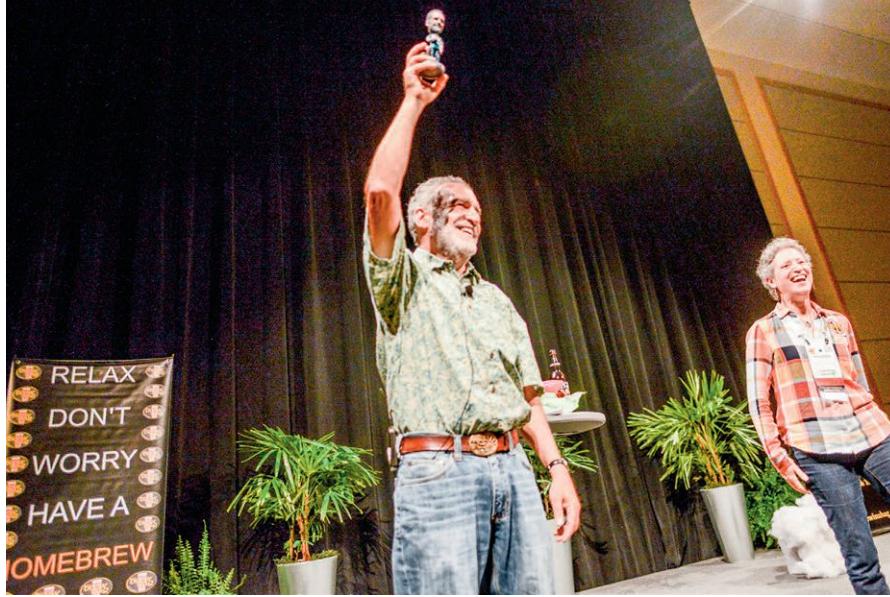
With Charlie Papazian stepping away from his role with the Brewers Association in January 2019, it was entirely appropriate for the AHA Governing Committee to choose the founder of the AHA and author of *The Complete Joy of Homebrewing* as the recipient of this year's AHA Governing Committee recognition award. I can't think of anyone more deserving. AHA Governing Committee Chair Roxanne Westendorf surprised Charlie by presenting him with the award immediately following his keynote address at Homebrew Con. In addition, she gave Charlie a custom-made Charlie Papazian bobblehead on behalf of the Governing Committee. Check out the video of the keynote address mentioned above to see the presentation.

### Radegast Club Award

Since 2014, the AHA has recognized the great contributions homebrew clubs make to their local communities and the greater homebrewing community with the Radegast Club of the Year award, named for the ancient deity the Slavs credited with inventing beer.

During the NHC awards ceremony at Homebrew Con, former AHA Governing Committee member Drew Beechum, who came up with the idea for the Radegast award (which he originally called the Awesome Club of Awesomeness Award), along with Brian Pierce of YCH Hops, sponsor for the Radegast award, announced the Oregon Brew Crew as the 2018 Radegast Club of the Year Award winners. While the location of the club was not a factor in the judging, the timing was fortunate, as the Portland-based Oregon Brew Crew (OBC) was well represented at the conference.

The OBC was founded in 1979 and has deep ties to the Oregon brewing community. Past club members have gone on to create some of the most celebrated



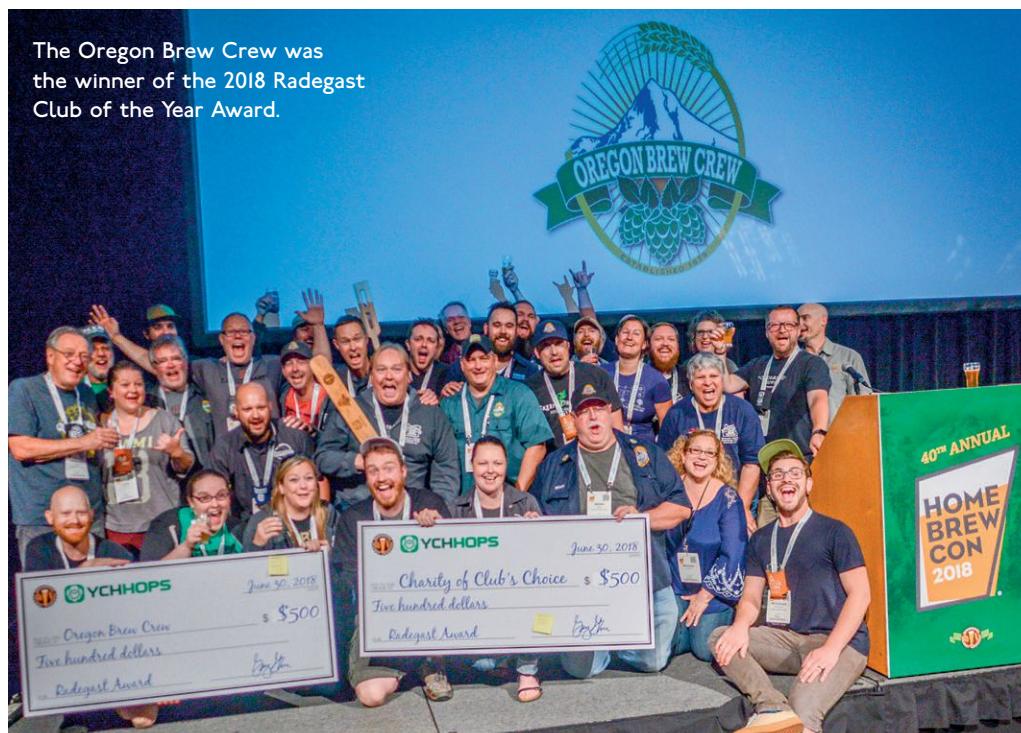
AHA Governing Committee Chair Roxanne Westendorf presented Charlie Papazian with the AHA Governing Committee Recognition Award at Homebrew Con in Portland, Ore., this year.

craft beers in the Pacific Northwest, including those from Deschutes, Upright Brewing, Montavilla Brew Works, and Bent Shovel Brewing.

The Oregon Brew Crew has more than 300 active members today and has a diverse board of directors overseeing a diverse club membership. The OBC's annual SheBrew is a beer festival and homebrew competition focusing on

women in the world of brewing. Female-identified homebrewers are invited to enter a people's choice style competition. Funds raised go to the Human Rights Campaign and its work for lesbian, gay, bisexual, and transgender equality. In 2018, the event raised almost \$20,000 for the Human Rights Campaign.

In addition to the Oregon Brew Crew's promotion of diversity and inclusion



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The Homebrewer employee Chris Manzi (left) accepts his award from American Homebrewers Association business programs coordinator Millie Shamburger during Homebrew Con 2018 in Portland, Ore.

in homebrewing through philanthropic efforts, their Sustainable Water Challenge became internationally famous after its very first year, when it was featured in the *Wall Street Journal* and dozens of other media outlets. This competition promotes the use of clean, recycled wastewater to make great beer, raising awareness for the conservation and retreatment of wastewater back into the potable drinking supply.

To learn more about the Radegast Club of the Year Award and the Oregon Brew Crew, see the Community section of [HomebrewersAssociation.org](http://HomebrewersAssociation.org).

### **Homebrew Shop of the Year Award**

This year, we introduced a new award to acknowledge the enormous contributions that homebrew supply shops make to the homebrewing community. At the Homebrew Con awards ceremony, AHA business programs coordinator Millie Shamburger presented the Homebrew Shop of the Year Award to The Homebrewer: Supplies and Resource Center based in San Diego, Calif.

This new award received great participation, with 299 total nominations from American Homebrewers Association members. The nominees were judged by your very own Governing Committee and AHA staff based on criteria that we

believe exemplify a well-run, successful homebrew shop: local homebrew community support, education, customer service and engagement, promotion of homebrewing to the public, and responsible business practices.

It was tough judging these entries, as there were many deserving shops, but The Homebrewer, owned by George Thornton, stood out amongst the 99 unique homebrew shops that received nominations. The Homebrewer opened its doors in early 2012 and has supported the local homebrewing community in creative ways ever since. They recently opened a small brewery that is affiliated with the homebrew shop as well.

Members who nominated shops were encouraged to call out compelling reasons that their choices might deserve the title of AHA Homebrew Shop of the Year. The Homebrewer was noted as having a top-notch, consistent inventory with fresh ingredients and an extensive selection. George and his team foster an educational environment with a robust selection of classes for all levels of homebrewers hosted by their well-educated, experienced staff. They go the extra mile by hosting neighborhood trash pick-ups with discounted beers to follow, supporting public art installations, and putting on a homebrew festival fundraiser that showcases local

homebrewers' creations while simultaneously supporting a local school.

It isn't all about the beer either—all types of fermentation classes and supplies are offered at the San Diego shop including cheesemaking, cidermaking, kombucha brewing, and more. Customer service is consistent, and employees have been recognized as not only knowledgeable, but also friendly, ethical, helpful, non-judgmental, accessible, engaging, and honest.

The American Homebrewers Association is very excited to have added this award, and we anticipate even more nominations next year. Keep your eyes peeled for our announcement that nominations are open for the 2019 award, and keep supporting your local homebrew shops!



### **BREW GURU®**

#### **AHA App**

If you haven't yet downloaded the AHA's Brew Guru app, or if you have the app but haven't updated it in a while, we launched a major update on July 9 that will significantly improve its performance. Brew Guru makes it easy to find breweries, homebrew shops, and, most importantly, AHA Member Deals participants. Brew Guru also gives you easy access to hundreds of homebrew recipes, including National Homebrew Competition gold-medal winners and clone recipes.

Unlike older versions, the new version does not offer push notifications to alert you of nearby Member Deals locations. However, you can still use it to locate and use Member Deals: just refresh the home page to get the nearest Member Deals participant at any time.

The other major update to the app is that the trial period for nonmember users has been extended from 15 to 30 days. During the Brew Guru trial period, non-members who download and log into the app can experience AHA member benefits like AHA Member Deals, eZy-

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murgy and the Zymurgy app, and members-only content in the app and on HomebrewersAssociation.org (note: trial membership does not grant access to members-only event registration). The Brew Guru trial membership is a great way to introduce friends and family to AHA benefits at no cost.

## Learn to Homebrew Day

Speaking of friends and family, the AHA's 20th annual Learn to Homebrew Day is coming up Saturday, November 3, the perfect opportunity to invite your nonbrewer friends and family over to brew a batch. It's easy to participate—just check out the Events section of HomebrewersAssociation.org for details. Homebrewing can be intimidating for the uninitiated, so I recommend keeping things simple by starting out with an extract batch. From there, your pupils can take what they've learned to wherever they want to go in the hobby.

While you are brewing, get your brewers-in-training to download Brew Guru!

## Government Affairs Update

The AHA continues its efforts to ensure homebrewing rights are maintained throughout the United States. While most states' legislative sessions are closed for the year, the AHA is currently working on homebrew-related issues in Missouri, Hawaii, Virginia, Nevada, North Carolina, and Ohio.

Last May, the AHA hosted the first homebrew tasting during the Brewers Association's annual Hill Climb Reception in Washington, D.C. In addition, we're working on the first ever Brew on the Hill event in Washington, scheduled for September 27. These events help elevate awareness for homebrewing among federal legislators and their staffs.

These government affairs activities wouldn't be possible without your member dues. Thank you!

Until next time, happy brewing!

**Gary Glass is director of the American Homebrewers Association.**





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# Nomenclature Matters

Dear *Zymurgy*,

As soon as I got the July/August 2018 issue of *Zymurgy*, I went straight to the barleywine Style Spotlight by Amahl Turczyn. The article says that some breweries “designated their strongest ales with a series of X’s or K’s: the more letters, the stronger the brew.”

While that last statement is true, what is not accurate is the assertion that X’s and K designated “their strongest ales.” All X ales were milds, and yes, XXX and XXXX milds were very strong, even approaching the original gravity of barleywine, but they were still mild ales.

The K designation meant *keeping*, or aged. These were identical in original gravity to the X ales, but they were hopped far more so they could be aged for longer periods of time.

It only takes a brief search to dispel barleywine myths, and there are many.

Sincerely,  
Kevin Profit  
Saginaw, Mich.

Dear *Zymurgy*,

It is my hope to help people understand the word *fruit* before I die, but I’m obviously not doing a good job if Dick Cantwell can write that “chili pepper is not a spice, it’s technically a fruit” (May/June 2018). It makes as much sense as saying that a kangaroo is not a car because it doesn’t have rocket engines.

*Fruit* has more than one definition. Botanically, it refers to the part of a flowering plant that contains the seeds: all



nuts, berries, and many other forms are fruits. A culinary fruit, however, is part of a plant that is relatively sweet. A *spice* is just some part of a plant that has a strong flavor that at least some people like.

Cucumbers, tomatoes, and eggplants are technically fruits, while rhubarb and pineapples are not, even though they are used in the kitchen as fruits. A few things—citrus fruits, apples, plums, and peaches, for example—are both culinary fruits and botanical fruits. Black pepper and vanilla are fruits that are used in the kitchen as spices.

So, if you like hot peppers in your beer, please use them without feeling like you’ve violated some biological law. After all, it’s all about the taste, isn’t it?

Regards,  
David Crowe  
Calgary, Alberta

**Zymurgy editor-in-chief Dave Carpenter responds:** As Ben Franklin once said, there are only two certainties in life: death and taxonomy (he didn’t say that, but Ben has proven himself a worthy scapegoat for many a misattributed quote). I think many of us might be more bewildered by the latter than by the former. The natural world is filled with all kinds of exceptions to the rule, which can be sources of frustration or the spice of life, depending upon whom you ask. A fruit by any other name is just as sweet unless said fruit is a chile, in which case exercise spice-level caution.

## Thirsty for Water Info

Dear *Zymurgy*,

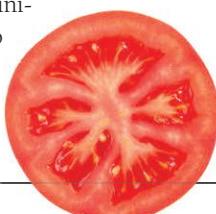
Thank you to Dave Janssen for the wonderful article on grisette (May/June 2018). What I really loved was the actual water profile provided. I wish all your authors and recipes did this. It is frustrating as a reader to have an author write about the importance of water profile and then only have vague statements like add some of this or that. Knowing the parts of the water is so much more helpful. Kudos to Dr. Janssen. Hope to see this same level of detail in future recipes.

Mike Puthoff  
Bettendorf, Iowa

## IBU Calculations

Dear *Zymurgy*,

I applaud Petr Novotný’s article, “Revisiting the IBU,” in the March/April 2018 issue of *Zymurgy*. I have been trying to reproduce his results and have concluded that there must be something amiss in the IBU model. At a temperature of 100° C (boil-



## READER-SUBMITTED HOMEBREW LABELS



My daughter and son-in-law handed out his latest pale ale with this label to friends and family as a surprise announcement that my wife and I were going to be grandparents. I have been homebrewing for 30 years and an AHA member for six.

Kendall Lemke  
Coldspring, Texas



beer was a Hatch green chile Belgian pale ale. It was a huge success and started me on my homebrewing career, which has lasted more than five years.

I worked with an artist friend of mine to create the logo. After competing in my first homebrew contest, I saw so many brewers

My homebrewery logo is based on the Zia symbol and the snow lion creature that my homebrewery is named after. The Zia symbol represents my home state of New Mexico, and the snow lion is my spirit animal. It represents fearlessness and joy, two things homebrewing has taught me over the years.

I often try to incorporate flavors from New Mexico into my beers. My first

Here are some of the labels my daughter Mandolyn has been designing for my brews. I think they are every bit as good as the brews in the bottles. I have been an AHA member since 2016, brew all grain, and have been brewing for 30 years.

Nathan Nicholas  
Ootsa Lake, BC  
Canada



with banners and stickers showing off their homebreweries that I wanted to have something that represents me and my beers. I believe this is the perfect logo for that purpose.

I have been an AHA member for more than a year, and I love everything it has done to improve my homebrewing.

Thanks!  
Matt Dondelinger  
Austin, Texas — East Braker Brewers

**Hey homebrewers! Submit your homebrew label at [homebrewersassociation.org/magazine/submit-bottle-label](http://homebrewersassociation.org/magazine/submit-bottle-label).**

ing), the reaction rate  $k_l$  has a value of about  $4 \times 10^{-40}$  inverse seconds ( $s^{-1}$ ), which is unbelievably low.

The case study explained in the article has a final IBU of 49. If we assume a gravity for this batch of 1.060 or 15° P, this means  $C_b$  is about 109.7 at the end of the boil. However, to get a  $C_b$  value this high with a  $k_l$  value of  $4 \times 10^{-40} s^{-1}$  over a 130-minute boil would require something like 20 trillion trillion metric tons of 10% alpha acid hops.

Further clarification on the formulae would be very helpful.

Scott Stanley  
Hayward, Calif.

**Author Petr Novotný responds:** Dear Scott, I'm glad that you liked my article and that you immersed yourself deeply into the math. I'm thrilled that someone really tried it from scratch.

Temperature should be in Kelvin, not degrees Celsius (to convert Celsius to Kelvin, just

subtract 273). If you used 100, it was 100 K, which is actually  $-173^\circ C$ .

For the sake of completeness, time is expressed in minutes, reaction rates are in inverse minutes ( $min^{-1}$ ), temperature is in Kelvin, and concentration is in the units of your choice (although I recommend mg/L, or ppm, which corresponds to the IBU definition). The original gravity used in the case study is 14° P, or a specific gravity of 1.050.

## LHBS Saves Big Brew Day

Dear Zymurgy,

The Clarksville Carboys planned a big Big Brew celebration at our president's house, but heavy rains initially caused us to cancel. However, our local homebrew store (LHBS), The Grog Home Brewing Supply, saved the day by letting us brew inside. We had six different rigs brewing, and all the grains went to a parti-gyle brew at the end. We had a great turnout, and lots of LHBS customers swung by to learn, too. Keep up the good work. We are always awaiting the next issue!

Jerry Wood  
Clarksville, Tenn.

**Send your Dear Zymurgy letters to [zymurgy@brewersassociation.org](mailto:zymurgy@brewersassociation.org). Letters may be edited for length and/or clarity.**

**Hey homebrewers! Submit your homebrew label for Dear Zymurgy section, at [homebrewersassociation.org/magazine/submit-bottle-label](http://homebrewersassociation.org/magazine/submit-bottle-label).**

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By Professor Surfeit



# Night of the Living Slime?

Dear Professor,

I am fermenting maple sap from the front pan of the evaporator. It has an original gravity of 1.080, and I'm using dry active distillers yeast (DADY). During early-stage fermentation, the sap is gelling up and oozing out like snot during kräusening. Sorry to be crude, but there's no better description at this point. Besides, I'm getting tired of cleaning it off the floor.

What do the food science folks have to say about sap/syrup behavior with the yeast?

Any advice? Thanks!

Jeff Comstock

Burlington, Vt.

Hello Jeff,

*I've always been intrigued about the possibilities of maple-derived beers, but I have never been inclined to ferment simple sap. I love that you are exploring the possibilities. But I must say the nights of the living slime sound discouraging. Yechhh.*

*I did what you probably have done by now. I googled tree slime and found a few references that could be indicative of your problem. There are certain bacteria that can infect a tree and create ooze. That bacteria might not be evident in the early spring run of sap, but its dormant presence could have infiltrated into your evaporation room. Even though you may have boiled the sap to evaporate some of the water, bacteria could migrate and likely still engage after you've chilled your concentrated sap.*

*I'd give your sap-based "wort" a good boil and then remove it from the sugar shack, using antiseptic procedures to chill and transfer to a fermenter before adding yeast.*

*By the way, if you want something that might taste more like beer than alcohol,*



*perhaps using a good lager or ale yeast instead of the DADY could help you brew a winning acer-beer.*

*Catch your breath and acer-tain a cleaner plan.*

Cheers beers,

The Professor, Hb.D.

## A Very Specific Problem

Dear Professor,

My last two brews appeared to have stuck fermentations. Using a refractometer, the specific gravity stopped dropping at approximately 1.030. I gave up on the previous batch and kegged it anyway (it was good, and I relaxed, didn't worry, and had several homebrews).

The current batch appeared to do the same thing. Then I checked the gravity with my old hydrometer and got a reading of 1.016. Could the refractometer be off that much? I calibrated it with water, but the

reading was the same. I would think (and have read) that the refractometer is more accurate. But I am leaning toward the hydrometer due to its simplicity and less possibility of error (and I wanted to keg, relax, and have a homebrew).

Any suggestions for using a refractometer?

Regards,

Brad

Greetings Bradley,

*That's a dilly of an issue. You'd think spending the extra bucks on a sophisticated refractometer would reduce the stress of brewing. But no, now you are worrying, and that's not such a good thing: worrying can ruin a batch of beer faster than just about anything.*

*Hydrometers and refractometers measure the same thing in two different ways. A hydrometer directly measures the density of a liquid*



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like wort or beer. A refractometer, on the other hand, measures the angle of refraction of light passing through a sample of liquid. The density of the liquid can be inferred from that angle.

It's not quite that simple, though. The scale on a refractometer is calibrated for basic sugar water like wine must or beer wort. As fermentation progresses, the liquid becomes more alcoholic and less sugary. The further along fermentation goes, the more the measurement diverges from calibration.

But fear not. If you know the original gravity of the beer in question, you can calculate the current specific gravity based on a refractometer measurement. Conversely, if you measure a sample with both the hydrometer and the refractometer, you can actually back-calculate the original gravity! (That can come in handy if you happen to forget to take a gravity reading on brew day.)

In your case, a refractometer reading of 1.030 and a hydrometer reading of 1.016 imply an original gravity of 1.052. If that jives with your beer, then your refractometer is performing as it should, and you just need to remember to account for the original gravity. For more on this topic, and to learn about the math you need to do those conversions, see Petr Novotny's article "Revisiting the Refractometer" in the July/August 2017 issue of Zymurgy.

There could also be a temperature-related issue. Even if your refractometer has automatic temperature compensation (ATC), you may still need to correct for temperature if it's well outside the range of calibration.

The simple hydrometer has been used for centuries. They are temperature sensitive, too, but not terribly so. If your hydrometer measures 1.000 in 60° F (15.6° C) water, then you can safely trust your hydrometer. But keep in mind that even a 10° F (5.6° C) difference in wort temperature will need to be compensated by adding or subtracting .002 degrees of specific gravity.

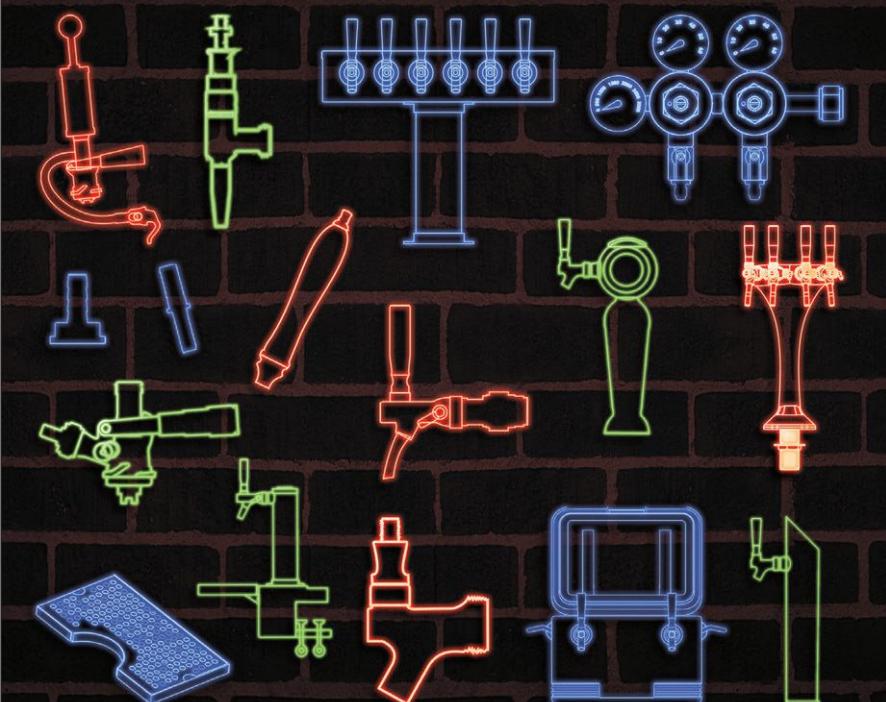
I'd recommend always keeping a glass hydrometer nearby as a backup against any suspicions you might have with artificially intelligized refractometers.  
Gravitationally pulled,  
The Professor, Hb.D.



Have a homebrew question? Send it to [professor@brewersassociation.org](mailto:professor@brewersassociation.org).

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By Amahl Turczyn

# Dunkelweizen

**D**unkelweizen, also called dunkles weissbier, adds maltiness, a dark chestnut brown color, and dried fruit and spice complexity to the already malty, flavorful, and complex Bavarian hefeweizen style. It shifts the malt balance towards the dark bread, toast, and toffee flavors of Munich dunkel while retaining some of the clove and banana aspects of pale wheat beer, along with the high carbonation. This allows for high drinkability in a dark, malty beer, which, when executed with the correct balance, can be heavenly.

I feel the very best examples of hefeweizen don't go over the top with banana, apple, plum, or bubblegum esters, nor do they showcase excessive levels of clove or vanilla phenols. These are present to some degree in most Bavarian wheat beer strains; the trick is knowing how to enhance or subdue them for the best balance. When it comes to dark weissbier, less is more. You want the bready, crusty, caramel, and wheat flavors to come forward, with yeast-derived characters playing their parts mostly in the background.

## Ingredients

According to Bavarian tradition, over 50 percent of a weissbier grain bill should be wheat malt, and this is no less true for dunkelweizen. Dark Munich and Vienna malts make up the other 40 to 50 percent for depth and color, and a touch of dark caramel can add heft and sweetness. A huskless black malt like Weyermann Carafa can bring up the rear if more color is needed.

Some Bavarian wheat ale yeasts produce a slight tartness in the beer. Tart weissbier is more common than tart dunkelweizen—although if you haven't tried Unertl Ursud, you should—but it is an option for sour fans. I also prefer phenols, especially clove and vanilla, to overtake banana and



bubblegum esters in dunkelweizen. This can be achieved through yeast selection, pitch rate, and fermentation temperature.

White Labs WLP380 Hefeweizen IV and Wyeast German Wheat 3333-PC produce a phenol-forward balance at 64° F (18° C), even though White Labs' website clearly states optimum fermentation range is 66 to

70° F (19 to 21° C). Pitch a strong starter, and this strain will do just fine at cooler temperatures while minimizing ester production. A warmer temperature is safer for thorough attenuation if you are not doing a starter. That attenuation is very important to this style, so if you have any doubts about your pitching rate, ferment warmer. The trade-off is greater production of banana esters (isoamyl acetate) over clove phenols (4-vinyl guaiacol). You'll also get more banana/apple with the Weihenstephan strain (White Labs WLP300 or Wyeast 3068), but it also produces excellent results. You shouldn't get tartness from either. Some brewers use both strains and blend them.

Dunkelweizen also has a date, dried fig, and prune quality that works really well in a few select styles, and this is one of them; only it isn't a yeast-derived ester, but the moderate use of a super-dark caramel malt called Special B in the grain bill. Too much can dominate, but under five percent of the grain bill lends a subtly delicious layer to the multi-dimensional bready complexity you are building here, and I prefer it to the caramel Munich malts often recommended for the style. Caramel 120 or 150 are also options.

On that note, though, eschewing Munich and Vienna malts in favor of caramel malt for color won't deliver the same malt complexity. Dunkelweizen relies on Munich malt for bready, toasty, crusty malt flavors as much as Munich dunkel does. You might be able to get away with a blend of dark Munich and Pilsner instead of Vienna, especially if your system isn't set up for decoction mashing (or you don't want to bother). This will yield good results and acceptable color, while the Pilsner malt will provide a diastatic boost to ensure complete conversion without a step mash or decoction protocol.

For the color malt, Weyermann Carafer II is a great way to go. Only two to three percent is necessary to lend the desired darkness without adding roasted or bitter grain notes that don't suit the style. Alternatives to consider are Weyermann chocolate wheat malt and Briess Midnight Wheat. At 400 to 550 Lovibond, these have about the same Lovibond ratings as Carafer II and III. As wheat malts, they are also huskless and add little grain bitterness at scant percentages. They've got slightly different flavors than Carafer and can work more harmoniously in wheat beer. But honestly, either will do the trick. You are shooting for a color of 14 to 23 SRM in the finished beer.

## Wort Production

Decoction mashing is traditionally done to increase yield and add bready layers of flavor. Including widely spaced temperature rests in your decoction mash can also promote conversion, even with undermodified malts or low-diastatic-power malts like dark Munich. The melanoidins that develop while boiling part of the mash lend depth and richness and can break down and free starches for conversion. There needn't be any concern about leaching tannins from the grain when boiling the thick mash for a decoction; the low pH prevents harshness from the husks.

Some brewers even do two separate mashes for wheat beers: a low-temperature step mash for the barley malt portion, and a full decoction protocol for the wheat malt, in which the entire volume of wheat malt mash is slowly heated through the various mash rests (one can use the brew kettle for this) and finally boiled for 20 to 30 minutes. The barley mash portion is kept cool enough that when the two mashes are combined after the wheat mash is boiled, the mixture equalizes in the low to mid 150s °F (66 to 68° C) for the main saccharification rest. It's one way to get the most out of your wheat malt, especially if it's undermodified, but it can make for a long brew day and may not be necessary if you use fully modified malts.

Whether or not you pull a decoction, step mashing can help ensure complete conversion, and the inclusion of a protein rest can have added benefits. Many

**Table 1: Color and diastatic power comparison of selected malts**

Malt	Color (SRM)	Diastatic Power (Lintner)
Avangard Vienna (DE)	3	62
Briess Goldpils Vienna (US)	3.5	80
BestMalz Vienna (DE)	4–5	76
Great Western Vienna (US)	3–4	120
BestMalz Dark Wheat Malt (DE)	6.5	76
Weyermann Dark Wheat (DE)	6–8	76
Wheat Malt (DE)	2	95
Rahr White Wheat Malt (US)	2.5	171
Rahr Red Wheat Malt (US)	1.6	163
Briess White Wheat (US)	2.5	160
Briess Red Wheat (US)	2.3	180
BestMalz Pilsner Malt (DE)	1.5	76
Rahr Pilsner Malt (US)	2	131
Avangard Pilsner Malt (DE)	1.7	76
Briess Pilsen Malt (US)	1.2	140
Rahr 2-row (US)	1.8	131
BestMalz Pale Ale Malt (DE)	2.5	76
Briess Pale Ale Malt (US)	3.5	85
Great Western 2-row (US)	2	141
Avangard Light Munich (DE)	7–11	76
Great Western Light Munich (US)	9	90
Briess Bonlander Munich (US)	10	40
BestMalz Munich (DE)	7.6	47
Avangard Dark Munich (DE)	14–16	76
Dark Munich (US)	20	25

brewers have reported conversion issues when using Munich as a base malt, even though technically you only need an average Lintner rating of 30–35° for complete conversion. Of course, if you choose to use a good portion—at least 30 percent—of high-diastatic-power pale two-row or Pilsner malt along with the Munich malt, you should have sufficient mash enzymes to be able to safely skip a multi-step mash or stepped decoction mash. German

base malts have traditionally been undermodified relative to their North American counterparts, and that's generally still true today, but note that there can be some variance in the German and American malts preferable for dunkles weissbier from brand to brand. Be careful with published diastatic power stats; most maltsters in the US and UK use Lintner; many on the Continent use Windisch-Kolbach (°WK). The WK equivalent is a much

higher number, and some published comparison charts mix the two, creating a lot of confusion. To convert, use the following formula:

$$\text{Lintner} = (\text{°WK} + 16)/3.5$$

Table 1 is a partial list of common malts on the market along with diastatic power ratings, converted where necessary to Lintner, as advertised on their respective websites.

It is important to take these numbers with a grain of salt, as methods and analyses can vary from one malting company to another, and every batch is a little different. Still, these numbers provide a benchmark to take into consideration when building your grain bill, as a good estimate of diastatic power can help dictate your mash regime. Note that dark German wheat malt is available, but even though it's in many ways ideal for dunkelweizen, its low Lintner rating means you might not want to use too much of it. Even if you are confident your enzymes are up to the task of conversion, there are still some good reasons for pulling at least a single decoction, and for this particular style, melanoidin development is one of them.

A protein rest is also traditionally recommended for wheat beer brewing since many wheat malts contain fairly high amounts of protein. Why, you ask? Doesn't protein help foam stability? Isn't it OK for wheat beers to be hazy? Well, haze isn't much of an issue unless you are aiming for kristal dunkelweizen. But there are good reasons to break down proteins in a wheat beer mash. Wheat beer wort is thick and gummy compared to all-barley wort, and a lot of the reason is high molecular weight proteins. These coupled with the lack of husk material can make for a very long sparge.

But OK, you reason, can't you just add rice hulls to speed things along? Yes, but there are other reasons. In his excellent treatise *German Wheat Beers*, number 7 in the Classic Styles Series from Brewers Publications, Eric Warner observes that while wheat malt contains a higher percentage of high molecular weight proteins compared with barley malt—double in fact—it has a significantly lower percent-



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# TALL, DARK AND BREADY

<b>Batch Volume:</b>	5.5 U.S. gallons (20.82 L)	<b>Color:</b>	20 SRM
<b>Original Gravity:</b>	1.055 (13.5° P)	<b>Alcohol:</b>	5.5% by volume
<b>Final Gravity:</b>	1.013 (3.3° P)	<b>Efficiency:</b>	75%
<b>Bitterness:</b>	15 IBU		

## MALTS

<b>5 lb.</b>	(2.27 kg) white wheat malt
<b>3 lb.</b>	(1.36 kg) Munich malt
<b>2 lb.</b>	(907 g) Vienna malt
<b>8 oz.</b>	(227 g) Special B malt
<b>4 oz.</b>	(113 g) chocolate wheat malt
<b>4 oz.</b>	(113 g) rice hulls (in mash, optional)

## HOPS

<b>1 oz.</b>	(28 g) Tettnang, 5% a.a. @ 60 min (15 IBU)
--------------	--------------------------------------------

## YEAST

White Labs WLP 380 Hefeweizen IV  
or Wyeast German Wheat 3333-PC, 2L starter

## BREWING NOTES

Use reverse osmosis water with approximately 1 g/gal. calcium chloride. Mash grains and rice hulls (if using) at 122° F (50° C) and allow to rest 20 minutes for a protein rest. Pull 9 qt. (8.5 L) thick mash and slowly heat to bring to a boil over 20 minutes. Boil 15 minutes, and then blend into main mash. Adjust main mash temperature to 150° F (66° C) if necessary and hold 30 minutes. Mash out at 168° F (76° C) and sparge.

Bring full wort volume to a boil; boil 90 minutes adding hops at stated intervals. Chill to 64° F (18° C) and oxygenate. Decant and pitch 64° F (18° C) yeast starter. Fit fermenter with blow-off device or allow at least 5 gal. (18.9 L) of headspace and/or use Fermcap to control foaming. Ferment at 64° F (18° C) until terminal gravity is reached. Rack, bottle with 1 cup (237 mL) dextrose or the appropriate amount of gyle, and warm condition bottles at 70–74° F (21–23° C) for one week. When full carbonation has been reached, store at cellar temperatures for at least one month.

## EXTRACT VERSION

Substitute 4 lb. (1.81 kg) wheat malt extract syrup for wheat malt, 2.5 lb. (1.13 kg) Munich malt extract syrup for Munich malt, and 1.5 lb. (0.68 kg) Vienna malt extract syrup for Vienna malt. Omit water salts. Steep chocolate wheat and Special B malts in a grain bag in 160° F (71° C) reverse osmosis (RO) water for 30 minutes. Remove grains, dissolve extracts completely in RO water, and top off to desired boil volume. Proceed as above.

age of low molecular weight proteins. That means less free amino nitrogen in the wort, which in turn means your yeast could suffer from malnutrition.

Warner even mentions a three-stage protein rest at 117, 122, and 126° F (40, 50, and 52° C) which is still performed by some German wheat beer breweries. The beginning temperature in this trio is

actually the peak temperature for ferulic acid development that encourages 4-vinyl guaiacol production by the yeast, so if you really like clove, a rest here might be worth your time. I find that the Hefe IV strain has no problem producing plenty of clove at 64° F (18° C) even without this rest, so I usually skip it. For saccharification rests, I generally mash on the lower beta amylase end of the spectrum to maxi-

mize fermentability and thus avoid excess sweetness in the finished beer.

## Fermentation

Weissbier fermentation is also a subject of much debate. Purists argue the beer should be open-fermented. Again, it comes down to esters and phenols; closed cylindroconical fermentation is supposed to suppress banana and clove production, whereas wide, shallow, open fermenters allow for more of each. For homebrewing, at least in my home, I have a few quibbles with open fermentation. The first is that I'm paranoid about getting fruit flies, drifting cat hair, dust, and other detritus in my precious wheat beer. I suppose covering the fermenter with cheesecloth or the like might work, but Bavarian wheat yeast, at least when pitched in proper amounts, loves to jump out of the beer after high kräusen, and in my closed conical, this always results in a healthy, gurgling blowoff.

Personally, I like it when a beer does this. All those gluey resins that adhere to the top and sides of a fermenter lid that are so difficult to scrub off are effectively removed from the beer. Fusel oils and other nastiness don't get a chance to fall back in; it's kind of a self-purging, self-cleaning procedure. I have no scientific evidence to back this up mind you, but anecdotally, I'd rather scrub it than drink it. If it means I get a bit less clove, then so be it. And if I want to top crop, I can wait until foaming subsides, remove the conical lid, and scoop the pure yeast floating on the beer's surface. Of course, if I'm fermenting in glass carboys, top cropping gets tricky, so perhaps if that's the only option, open bucket fermentation would be worth trying.

Once all that yeast settles and the beer begins to finish up, you may consider cold crashing to get the yeast out of suspension. With many wheat beer yeasts, this can be somewhat of a challenge, but the good news is yeast that likes to stay in your beer tends to finish its job, and that means better attenuation. Dunkles weissbier can be sweet and chewy if you aren't careful, so give your yeast the time it needs to finish all the way to the 1.010 to 1.014 (2.5 to 3.5° P) range per the BJCP Style Guidelines. This is from an original

gravity of 1.044 to 1.056 (11 to 13.8° P), yielding alcohol of 3.4 to 5.6% ABV.

Hops, as one would expect, are a minimal concern in dunkles weissbier, though noble German varieties are best to add floral, herbal, and spicy notes where those flavors are detectable. Bitterness should be very low to negligible. IBUs are usually in the mid teens, and flavor and aroma are pretty much absent, but as for varieties, Tettanger, Hallertau, Saaz, Saphir, or Spalt would all work. A 60-minute addition is traditional, though it's more for the antimicrobial benefits of hops than for bitterness or flavor. First-wort hopping also works well here.

Water for this wheat beer is generally soft, with just a bit of calcium chloride. Accentuating the malty accents and providing calcium for yeast health is the goal, which can easily be accomplished with a gram per gallon or so.

### Packaging

Carbonation is best done with unfermented beer if one is willing to go through the hassle of bottling, but for this style as with pale weissbier, I feel it's worth the hassle. High carbonation is part of the style's profile, and besides adding visual appeal, it also plays a big role in balance. Since there is no bitterness from hops, a brewer must rely on moderate strength, thorough attenuation, and carbonic acid from CO<sub>2</sub> to cut malt sweetness.

High carbonation coupled with a wheat beer's naturally elevated viscosity can pose problems with keg dispense. Sturdy glass bottles, however, can contain that high carbonation and allow for the tall topping of froth one expects from weissbier. Warner has a rather complex formula for calculating the correct percentage of unfermented gyle, or *speise*, to add at bottling. This can either be taken from a new batch that's just being run into the fermenter if you happen to be a regular brewer of wheat beer, or taken from the same batch you are bottling and added back in at the right time.

I've found it works best to "can" boiling wort from the kettle in sealable Mason quart jars, right before the end of the boil. This ensures that the wort is sterile and of

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the same original gravity as the fermented beer will be when it's pitched. These jars can be kept in the fridge or a cool cellar during fermentation, then measured out and blended in at bottling. Then it's a matter of racking on top of the unfermented beer and even perhaps stirring gently with the racking cane to ensure even blending.

You should add enough unfermented wort to your finished beer to bring the latter's gravity up by 1° P. Anecdotally, if you are in the range of 12.5 to 13.5° P original gravity, I generally add 1,200 to 1,300 mL speise per 20 L batch of fermented beer. This will yield about 3.5 volumes (7 g/L) CO<sub>2</sub>, which isn't as high as some weissbiers, but is still higher than most beer styles require. Then again, Dan Carey at New Glarus uses sugar to prime. Since he apprenticed at Ayinger Brewery in Bavaria and makes some pretty amazing beer of his own at New Glarus, I wouldn't presume to second-guess that decision. A scant cup of dextrose should do the trick if you go this route.

However you choose to prime your bottles, this level of carbonation is at the upper

level of what many single-use American beer bottles can safely handle. You'll want to seek out thick, sturdy bottles to safely contain your carbonating beer and reduce the risk of bottle bombs.

Find a warm, dark place for your capped bottles to undergo their secondary fermentation, which should last a week or so. I have a heated floor where I can keep the cases at 70 to 75° F (21 to 24° C), and I can usually tell when the conditioning begins to cease, as the beer will clear somewhat. At that point, you can store the bottles at cellar temperatures, and when they've had a few weeks to settle, it's time to chill one down and see what you've got. Because of the live yeast in the bottle and their ability to scavenge oxygen, I've found bottle-conditioned weissbier has one of the longest shelf lives of any homebrew style, and even at its modest strength, I've had dunkelweizen beers that tasted amazing after five years or even longer.

**Amahl Turczyn** is associate editor of *Zymurgy*. 

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## Production of Bottle Beer

## Material:

40 malt, and 30 of cereals, viz: choice pale malt, well grown i.e. about 90% of the kernels should have the awospur developed to 3 to 1 the length of the kernel, and the barley should contain only a limited number of glassy & shiny kernels. The malt should have been stored for 3 months. Best quality of Rice for from any musty smell and free from foreign odds, or best quality of oats or meal containing not more than 1% of oil, nor more than 13% of moisture.

## Mashing Process:

For 100 lbs of malt, add 100 lbs of water, boiling ready to pitch with yeast and the following materials, viz: 30 lbs of corn, 5 lbs of rice, 10 lbs of alluvial malt, raise to 50° R - 126.5° F, run up to 54° R - 153° F of rice, run in 10 min to 56° R - 153° mash for 2 hours, run up to boil, scum and let boil 1/2 hour. If corn is used take 20 lbs of corn, add 10 lbs of alluvial malt, mash for 1 hour and let boil 1/2 hour. The wort is now ready.

# BREWING HISTORICAL *Lagers*

BY STAN HIERONYMUS

Dough in 33.7 lbs of corn, 36.6 lbs of water of 55° R - 126.5° F, mash 15 min, stop machine, rest one hour, start machine, raise the temp with steam to 35° R in 10 min, run down Rice mash in 15 min, temp. of mash tub should then be 54° R - 153° F, mash at this temp. for 15 min, raise with steam and 3 lbs of Boiling water to 59° R - 165° F, in about 10 min, and mash until inversion is complete, i.e. until all the starch is inverted into sugar and dextroin, stop machine, run four lbs of boiling water through the pffaff, rest one hour, tap and sparge with water of 64° R - 176° F. If you have no live steam in the mash tub dough in at 50° R - 126.5° F, mash 10 min, stop machine for 1/2 hour, start machine and run up with corn or rice mash and finish as above.

## Boiling of the wort with hops:

Boil the wort, after the kettle is full, with 10 lbs of hops for 1 hour, add 40 lbs of choice American Hops boil 40 min, add 50 lbs more of the same Hops, boil 20 min, add 25 lbs of imported Hops, finely divided into the Hop Jack. Run the wort down, rest for 15 min (first), then add 25 lbs of Hops with 3 lbs of Boiling water, aerate well on Hamer lot cooler if with power if possible filled

to 60°-65°, pitch with mouth of yeast for 1000,  
and pump over where in Knausen lot the  
rise to 70°-75° to

181

The Bolzen Beer Band polkas hard.



## You might have read ABOUT THIS "LAGER REVOLUTION" OCCURRING IN AMERICAN CRAFT BREWING AND WONDER HOW BROAD THE CATEGORY MIGHT BE.

One day in May, *BeerAdvocate* columnist Andy Crouch tweeted, “Branching out beyond Pilsener, many other great lager styles need rejuvenation and attention. Moving from Pils to Helles is an easy step, but brewers should take the leap into a full exploration of malt and other classic lager styles.”

Not long after, beer historian Ron Pattinson replied, “Not so sure Lager styles need rejuvenation. They just need someone to brew the damn things properly.”

As Exhibit A, Pattinson could offer LagerFest, an event held a month earlier at Urban Chestnut Brewing Company

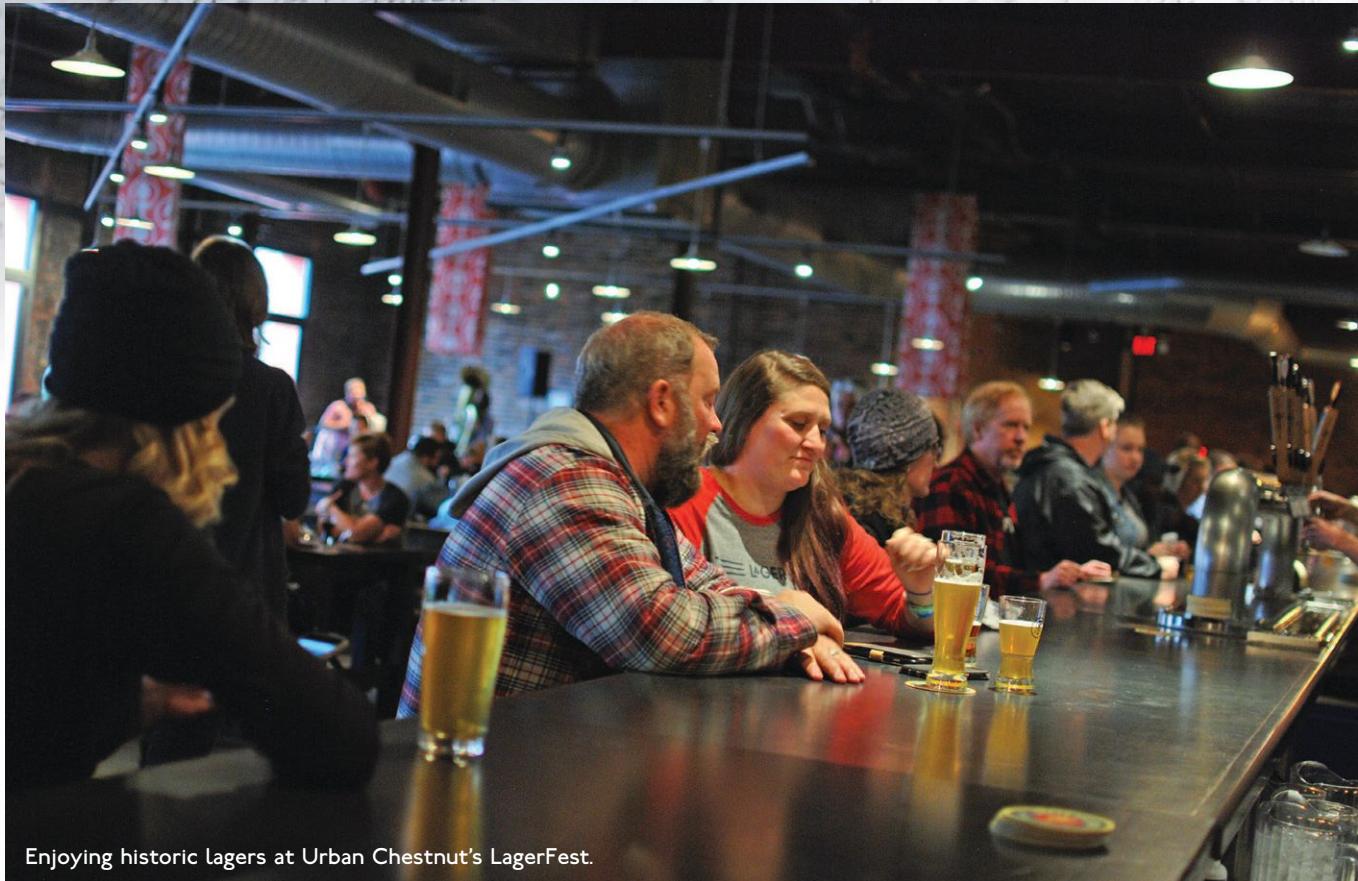
(UCBC) in St. Louis, one that resulted from a couple of questions Pattinson posed on Twitter. First, he asked, “Writing all these old Lager recipes I’m wondering. Could my dream of a historic Lager festival ever happen?” After several replies along the lines of “I’d go,” he tweeted, “Next question - would anyone like to

number of glassy & glossy rice grains have been stored for 8 months. Best quality of rice for brewing must be small and free from foreign seeds, or best quality of goats or meal containing not more than 1% of oil, nor more than 13% of moisture.

#### Mashing Process Rice tub:

For 100 Bbls of wort in the cellar at 14° Balling ready to pitch with yeast use the following materials, viz.: 30 Bbls of water, Hydant Syrup, put in 550 lbs of all-malt, 15 min., add 170 lbs of rice, run

The steaming process.  
Heat the water in  
within  $\frac{3}{4}$  of one hour  
pints for 38 min. by  
that the temp will  
to cool slowly in,  
out before, during or  
Unsteamed Bottles



Enjoying historic lagers at Urban Chestnut's LagerFest.

host an historic Lager festival?" UCBC co-founder and brewmaster Florian Kuplent was the first to respond.

About nine months later, Pattinson was standing in the Urban Chestnut fermentation hall holding a glass of 1879 Kulmbacher Export brewed by August Schell Brewing in one hand and considering what to put in the glass in the other. The Kulmbacher is a beer he's spent years trying to convince a commercial brewery to make. "Strong, dark and hoppy. I don't know why it took this long," he said.

Pattinson, who lives in Amsterdam, has worked with breweries in several countries to recreate dozens of historical beers based on his research. "Why do I want to taste extinct styles?" he said in a conver-

sation a few years ago. "On one level it's purely from curiosity: how did it taste, what did it look like, how did it drink? All the things you can only really learn about a beer by having one in a glass in front of you. That simple need to know could be satisfied by a pint or two."

"But then there's the cultural aspect. Beer styles—and especially those associated with a specific place—have a wider significance than just being a drink. Because every beer style is a unique cultural item. When one disappears, the culture it came from is diminished."

#### RECIPES FROM A DIFFERENT ERA

"Internally we talked about some sort of lager festival for at least a couple of years," Kuplent said, explaining why it was easy

to answer Pattinson's question so quickly. Lager and Urban Chestnut became synonymous as soon as the brewery opened in 2011. Kuplent, who grew up in Bavaria, is a diploma brewmaster, having earning his master's degrees in malting and brewing science 20 years ago from the Technical University of Munich.

UCBC invited a short list of breweries that have also proven adept at making lagers to participate, suggesting they pick from recipes provided by Pattinson. Most come from his book, *Let's Brew*. It is no secret that renewed interest in craft lagers starts with brewers.

"It was a real treat to get the call from Florian," Matt Brynildson at Firestone Walker Brewing wrote via email.

"Looking through the list of recipes that Florian provided and thinking about the lager beers that we brew, the [1896] Munich Lagerbier appealed to us largely because we have never brewed a beer like this before," he wrote. "I played around with 100% Munich malt recipes as a homebrewer many moons ago, so I knew there was some potential to make a nice malt-forward beer."

Evan Partridge, Firestone Walker's Venice Beach R&D brewery manager who did much of the development work for recently released Firestone Walker Lager, made the beer. "A dark, Old World Munich lager sounded like something that, if it worked, might be nice to add to our pub offerings," Brynildson wrote.

The list Pattinson provided included several 20th century English lagers, examples that do not jump immediately to mind and not ones brewers naturally look to first. Niko Tonks at Fair State Brewing Company in Minnesota, who brews a range of "proper German" lagers, had to talk himself out of choosing still another. "It was a departure," he said, making 1959 Lees Lager with Crisp Plumage Archer for the base malt.

"It was an eye opener. In my head I knew it would be distinct from Continental [malts], but it was distinct in its own way," he said. It was not only different than European malts he uses regularly, but the flavor was surprisingly different than that of English pale ales. He brewed a 7-barrel batch on the brewery's pub system, expecting it would be around long enough to take to other special events like LagerFest. "Three-point-eight, three-point-nine ABV beers will always be slow movers," he said. "It all up and disappeared before I could do that (take it elsewhere)."

Michael Toomes at Chuckanut Brewing was drawn to 1911 Heineken Gerste by the story Pattinson told about the beer in his blog, *Shut Up About Barclay Perkins*, and because it is a lower alcohol beer. "It's pretty remarkable that Gerste was over 50 percent of Heineken's production in 1911 and now it's a very obscure, little-known style. I had never heard of or tasted the style prior to this," Toomes wrote before traveling to St. Louis to taste beer other brewers had chosen.

## HISTORIC GERMAN AND AUSTRIAN BEERS FOR THE HOME BREWER



ANDREAS KRENNMAIR



**Left:** Andreas Krennmaier's book includes recipes for now obscure 19th century beers.  
**Above:** LagerFest's lineup of seminars.

## Old Ledger Lager

Courtesy Stubborn German Brewing Company

<b>Batch Size:</b>	5 US gallons (18.9 L)
<b>Original Gravity:</b>	1.046 (11.4° P)
<b>Brewhouse Efficiency:</b>	70%
<b>Final Gravity:</b>	1.010 (2.6° P)
<b>Bitterness:</b>	23 IBU
<b>Color:</b>	3 SRM
<b>Alcohol:</b>	4.8% by volume

### MALTS AND ADJUNCTS

- 6.05 lb.** (2.75 kg) American pale 6-row malt  
**2.98 lb.** (1.35 kg) flaked rice

### HOPS

- 0.9 oz.** (26 g) Willamette, 3.6% a.a. @ 60 min  
**0.36 oz.** (10 g) Willamette, 3.6% a.a. @ 40 min  
**0.36 oz.** (10 g) Willamette, 3.6% a.a. @ 20 min  
**0.46 oz.** (13 g) Saaz, 2.1% a.a, whirlpool

### YEAST

White Labs WLP830 German Lager Yeast (1.5 million cells /mL/°P)

### BREWING NOTES

Single infusion mash at 149° F (65° C) for 60 minutes at a mash thickness of 1.5 qt./lb. (3.13 L/kg). Boil 60 minutes. Ferment at 50° F (10° C).

### EXTRACT VERSION

Replace grains with 4.4 lb. (2 kg) Pilsner malt extract syrup and 2.2 lb. (1 kg) rice extract syrup. Dissolve completely in hot reverse osmosis water, top up to desired boil volume, and proceed as above.

Chuckanut, of course, is adept at German-style beers. The brewery has won 18 medals at the Great American Beer Festival® since opening in 2009, including golds for

Dunkel and Kölsch in 2017. Shortly after LagerFest, Chuckanut won gold medals for Kölsch and Pilsner in the World Beer Cup®. "Sub 4.0% beers (Gerste is 3.9%)



Dovetail Brewery contributed an 1870 Bohemian Summer Beer.

usually don't sell very well in the current craft beer landscape, which is a shame. However, this gave us the excuse to brew one and present the story of the style to the public," Toomes wrote. "I think it can be educational and hopefully people like it enough to be turned on to highly sessionable, lower alcohol beers."

He didn't set out to make a beer that tasted *exactly* like Gerste did in 1911. Pattinson appreciates that challenge. "The ones based on more recent recipes, probably weren't far off. The older ones, it's harder to say," he said. Quite simply, many older lagers had very low degrees of attenuation.

When brewing with modern, well-modified malts, getting an apparent degree of fermentation (ADF) as low as brewers

in the past would be impossible. Toomes used a healthy percentage of Carafoam to add body and leave residual sugars behind. For the first time ever, he conducted a decoction mash and he also added some melanoidin malt.

Nonetheless, the ADF was higher than it would have been in 1911 and the beer probably not as sweet as the original. Also, the original was fermented quickly and barely lagged. Chuckanut lagged its version four full weeks. "We wanted to make it as close as we could with the ingredients that we had," Toomes said. "Most importantly, we wanted it to taste good."

#### THE AUTHENTICITY CHALLENGE

Balancing "tastes good" and "authentic" is something Andreas Krennmair considered in assembling recipes for *Historic German*

*and Austrian Beers for the Home Brewer*, a collection of recipes for some obscure 19th century beers published earlier this year (see Beeroscope, July/August 2018).

"I think authenticity in historic beer is one of great tension. In what way do I want to be authentic? Do I want to produce a beer that tastes like the historic original, do I want to be authentic in the process and the equipment that I use to brew it, do I want to use authentic ingredients?" he wrote via email from Berlin.

"I think [a better] approach is to focus on processes first and to keep the ingredients as simple as possible. By keeping ingredients simple, the brewer can focus on the processes, which are often quite intricate and certainly have a large impact on the overall character of the beer." The recipe he provided for 1834 Augsburger Lagerbier, and its complicated mashing schedule, serves as an excellent example.

He also recognizes the problem achieving the proper ADF. "Finding a yeast that gets attenuation, residual sweetness, and alcohol content to the same levels as historic beers is surprisingly difficult, and makes this aspect hard to get right," he wrote.

Writing in *Brewery History*, the journal of the Brewery History Society in the United Kingdom, George Schwartz points out the interest in resurrecting historic beers is much less common with other alcoholic beverages. "Re-creation beers, whether authentic or not, illuminate our understanding of beer and culture and how we are actually very similar to our ancestors; beer is still a ubiquitous influence in our lives today," he wrote.

Five presentations during the day emphasized the connection. This was not a "drink all you can for one price in four hours" festival. It began at 11 on Sunday morning and concluded at 8 in the evening. Attendees paid \$15 for a tasting glass and tickets for five 6-ounce samples. Additional tickets for two samples cost \$5. The event spread across Urban Chestnut's expansive production brewery campus, and drinkers of history mingled in the bierhall area with regular brewery customers.

**"I think [a better] approach is to focus on processes first and to keep the ingredients as simple as possible. By keeping ingredients simple, the brewer can focus on the processes, which are often quite intricate and certainly have a large impact on the overall character of the beer."**

—Andreas Krennmaier,  
author of *Historic German and Austrian Beers for the Home Brewer*

The 11 beers brewed using recipes Pattinson provided were:

- 1911 Heinenken Gerste  
*by Chuckanut*
- 1879 Kulmbacher Export  
*by August Schell*
- 1888 Bohemian Export  
*by Kansas City Bier Company*
- 1960 Heller Doppelbock  
*by Two Roads Brewing Company*
- 1896 Munich Lagerbier  
*by Firestone Walker*
- 1866 Munich Bock  
*by Scratch Brewing and Southern Illinois University Fermentation Sciences*
- 1870 Bohemian Summer Beer  
*by Dovetail Brewery*
- 1959 Lees Lager  
*by Fair State*
- 1930 Barclay Perkins Draught Lager  
*by Bent Brewstillery*
- 1939 Barclay Perkins Sparkling  
*by Urban Chestnut*
- 1964 Eldridge Pope König Lager  
*by Urban Chestnut*

Other historic lagers included 1910 St. Louis Lager, brewed by both Bierstadt Lagerhaus and Urban Chestnut following a recipe Kuplent provided, and an 1899 lager from the Monroe Brewer outside of St. Louis made by Stubborn German Brewing Company.

# 1834 Augsburger Lagerbier

Courtesy Andreas Krennmaier

The main difference of Augsburger beer lies in the process of how it was made: instead of following the typical Bavarian decoction mash, historic sources describe a unique method that was only practiced in this form in Augsburg.

In addition to the different approach to mashing, the beer was also treated differently when filled into casks: as in other parts of Bavaria, the wooden casks in Augsburg were pitched. But while in other regions the pitch was allowed to cool down, in Augsburg the beer was filled into the casks when the pitch is still burning hot. This was said to give the beer of Augsburg its peculiar flavor that distinguished it from the rest of Bavaria.

**Editor's Note:** The US customary and metric quantities given here are not interchangeable. Quantities indicated with US customary are suitable for a 5-gallon batch while metric quantities are suitable for a 20-liter batch. So just pick the system you prefer and go for it.

<b>Batch Size:</b>	5 US gallons or 20 L	<b>Bitterness:</b>	51 IBU
<b>Original Gravity:</b>	1.057 (14° P)	<b>Color:</b>	9 SRM (18 EBC)
<b>Final Gravity:</b>	1.010 (2.6° P)	<b>Alcohol:</b>	4.9% by volume

## MALTS

9.4 lb. (4.5 kg) Munich malt

## HOPS

4.7 oz. (140 g) Spalter, 3% a.a. @ 120 min

## YEAST

White Labs WLP820 Oktoberfest/Märzen Lager or WLP920 Old Bavarian Lager

## BREWING NOTES

Dough in malt with 6 L (1.5 gal.) of cold liquor at 10° C (50° F), and rest for 6 hours. Draw off 0.6 L (0.15 gal.) of wort (Wort A) and set aside. To the main mash, slowly add about 10 L (2.5 gal.) of boiling liquor, constantly stirring, until it reaches 60° C (140° F). Remove about 3.5 L (0.87 gal.) of mash, mix with previously drawn-off wort (Wort A) in a separate vessel, and allow to rest for 2 hours.

Meanwhile, lauter the main mash and collect and chill wort (Wort B). After the reserved mash has rested 2 hours, bring it to a boil and then mix in with main mash to achieve a temperature of 67° C (153° F). Bring main mash to a boil, boil for 45 minutes, then return to mash tun and let it cool down to 86° C (189° F).

Add chilled wort (Wort B) to the kettle. Lauter and sparge main mash with 78° C (172° F) hot liquor until you've collected about 26 L (6.5 gal.) of wort in the kettle. Bring wort to a boil. Add all hops to the wort and boil for 120 minutes.

Chill wort to 8° C (46° F) and pitch yeast. Wait until fermentation has completed, and then mature and condition in a bunged, pitched cask for at least 2 months, up to 18 months. Alternatively, you can use a metal keg.

Stubborn German sits on the town square in Waterloo, Ill., about 25 miles southwest of the Anheuser-Busch brewery in St. Louis. Monroe Brewery opened in Columbia, a neighboring town, in 1874 and closed in 1906. Chris Rahn wrote the recipe for Old Ledger Lager using a ledger Leonard Schoppe's great-granddaughter had in her attic. Schoppe operated the brewery from 1897 to 1900.

The relatively limited number of historic beers and extended hours made it easy to

sample a good portion of what was available at a leisurely pace. It wasn't exactly like a Sunday afternoon in a St. Louis biergarten 150 years ago—the Bolzen Beer Band, a Nebraska trio specializing in punk polka made sure of that—but it struck a pleasant balance.

## WHAT'S NEXT?

The first LagerFest will not be the last. "I was extremely positively surprised how many people showed up. The people I talked to were really into it," Kuplent said.

# 1879 Kulmbacher Export

Courtesy Ron Pattinson

In the early days of lager brewing outside its traditional central European home, several regional Bavarian styles were imitated abroad. One of these was Kulmbacher.

Even Heineken used to brew this style of strong, hoppy, very dark lager. But for some reason it quickly fell out of fashion and is today virtually unknown as a style. Which is a shame as I'm sure its bold flavors would go down well with modern drinkers. You could think of it as a Münchener on steroids.

<b>Batch Size:</b>	5.8 US gallons (22 L)
<b>Original Gravity:</b>	1.065 (15.9° P)
<b>Final Gravity:</b>	1.018 (4.6° P)
<b>Bitterness:</b>	80 IBU
<b>Color:</b>	30 SRM
<b>Alcohol:</b>	6.2% by volume

## MALTS

**15.25 lb.** (6.92 kg) Munich malt 20° L  
**8 oz.** (227 g) Carafa III

## HOPS

**3.5 oz.** (99 g) Hallertau, 4.3% a.a. @ 60 min  
**3.5 oz.** (99 g) Hallertau, 4.3% a.a. @ 30 min

## YEAST

White Labs WLP830 German Lager Yeast

## BREWING NOTES

This Bavarian method of decoction is taken from *Handbuch der Chemischen Technologie: Die Bierbrauerei* by Dr. Fr. Jul. Otto, published in 1865, page 128.

As soon as the water in the kettle reaches 50° C [122° F], as much as is needed is put into the mash tun to dough in.

After an hour, when the rest of the water has come to the boil in the kettle, this is added to the mash. The temperature of the mash should be 53.75-56.25° C [128.75-133.25° F]. A small amount of water should remain in the kettle so that the temperature of the mash is correct. Or a small amount of cold water is added to the mash. When, after resting, the wort in the mash tun has cleared, this is run off and boiled in the kettle. After just a few minutes boiling, this lauter mash is added back to the tun and mashed for 45 minutes. The temperature of the mash should be 71.25-72.5° C [160.25-162.5° F].

Usually a small quantity of wort is left in the kettle and boiled with all the hops for 10 to 12 minutes (Hopfenröstern).

The mash in the tun is left to rest for 90 minutes, then it is drawn off and added to the kettle where it interrupts the Rösten.

The wort from the first lot of cold water poured over the grains is usually used for topping up the kettle.

Boil wort 90 minutes, adding hops as indicated. Chill wort to 48° F (9° C) and pitch yeast.

# The Last Days of Lager Beer in St. Louis

**This report from the St. Louis Republican in September 1854 provides proof that German immigrants embraced bottom-fermented beers. Remember that lager was not brewed in the summer, so when beer made in cooler months was gone, it was gone.**

"The last days of Pompeii" is a romance of Belwer [Edward Bulwer-Lytton], known to the world; but "the last days of Lager Beer in St. Louis," is a romance yet to be written. We certainly will not pretend to write it, for we claim no merit as a novelist; but we will give facts, plain facts, and if any one feels interest enough in them to use them for a theme of romantic literature, we most cordially allow him the privilege of doing so.

With last Sunday, September 17th, the last drop of Lager Beer in St. Louis went down to - posterity. It was, and is no more. During the past extremely hot summer, it must have been some sort of gratification to our German population to have resorted to a good glass of Lager Beer, and freely did they make use of it. At places where, as we are told, the best of that article was kept, scarcely enough hands could be procured to serve the daily increasing number of consumers. But the extraordinary demand, occasioned by the extraordinary heat, soon exhausted the supply. One house after the other announced to its customers, that next day 'the last barrel of Lager Beer' would be tapped.

This direful news brought grief unto many, and not a few were this person: stopped at street corners by inquisitive friend, with the often-repeated query 'Where is good Lager Beer yet to be had?' At last, two places only remained where the needful could be got - one, a spacious bar room, was the Mecca, during the day; the other, being a garden, in the evening. But days hurried on. The demand, having been concentrated to these two places, was too great for their supply, and finally, the bar room gave out. Matter

now seemed to wear a gloomy appearance. 'Mr. K. has shut his house,' was sad tiding indeed. However, the consolation remained. The delicious fluid could yet be obtained at the garden, as so it went on for a few days. But, alas, only for a few days. One fine morning, as a social company were gathered under the beautiful acacia trees in that garden, the otherwise very kind and affable host, with one glass full of Lager Beer, in his left 'fist,' advanced toward the company, and handing, it to one of them, pronounced it to be positively, 'the last drop of our last barrel!' Great consternation followed this announcement, because it then became evident that the days of Lager Beer in St. Louis for this summer were numbered.

But soon a report was spread, that a certain Mr. G. had two kegs of needful yet left for his particular friends. It did not take long for that report to make the round of the particular friends of this benevolent gentleman, numerous as they are, but it embraced even foes, and the two kegs had only a bare existence, for soon after they were tapped a deep, hollow sound, in answer to a nick at the bottom, gave satisfactory evidence that they were empty.

In the afternoon of that very same day it was discovered - how we cannot tell - that at a certain brewery downtown, a few barrels were still left to satisfy the wishes of our German community; and, in pursuance of this information, a perfect migration of our German citizens took place to the popular spot. But there, as we are informed, the Lager Beer is also gone! And so, we have recorded "the last days of Lager Beer in St. Louis."

"We will definitely do it again next year, although we're not sure about the theme. I do think the focus on a category, or sub-category, makes sense, and inviting people who are known for that."

Even if Kulmbacher turns out to be the next pastry stout and Gerste the next Gose, lagers likely will still be a niche. "In general, calling it a lager fest, you're pretty much narrowing it down," said Rahn. "But there was still such a huge variety. If you couldn't find something you liked you don't like beer."

It seemed that nobody, with the possible exception of Pattinson, enjoyed the festival more than the brewers themselves. "It's exactly the sort of festival I'd go to if somebody wrote me a blank festival check," said Tonks, who drove 560 miles from the Twin Cities to deliver his lager. "It was fantastic to drink all those beers."

When Urban Chestnut head brewer Jason Thompson told Rahn about the festival he said, "It's going to be a nerdy thing as far as lager goes."

That it was. Nine hours after Hagen Dost and Jenny Pfäfflin began pouring Dovetail beers in the fermentation hall, they were still talking lager with Pattinson, British beer writer Mark Dredge, (who is working on an oral history of lager), and a few other drinkers. They quit when the tap ran dry.

**Stan Hieronymus** is a professional journalist and amateur brewer who has made beer his beat since 1993. His travels have taken him to breweries in every state in the country. The editor at RealBeer.com, he's penned hundreds of articles for periodicals and publications and has co-authored four books with his wife, Daria Labinsky: *Brewing Local* (2016), *For the Love of Hops: The Practical Guide to Aroma, Bitterness and the Culture of Hops* (2012), *Brewing with Wheat* (2010) and *Brew like a Monk* (2005) for Brewers Publications and contributed to several other publications, including *1001 Beers You Must Taste Before You Die*.

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# BUILDING Beer: A CHEF'S PERSPECTIVE

By Heather Linderfelt

**N**ot long ago, beer choice consisted of domestics and imports. But with small breweries seemingly popping up on every corner, craft beer is buzzing with innovative and unique flavors. If you can think it, a brewer is trying to create it.

My background is in food, from dishwasher and waitress to sous chef and personal chef. I love flavor combinations and can't stop thinking about what I would do differently, if anything, and what else would go with what I am eating or drinking. It happens by the third bite and occasionally gets me into trouble.

"But, imagine going a step further and adding..." I might start. Or, "Wouldn't this be so good if next time I—"

"Just eat the meal," would be the response.

I started brewing when I was 25, which means (cough, cough) I've been a homebrewer for 23 years. But I still consider myself an amateur when it comes to the actual process. Jargon like wort, racking, bittering hops, flavoring hops, finishing hops, and second fermentation make it sound harder. Throw in some gypsum or use Irish moss, and I can feel my pulse quicken with panic. I brewed by the box for years. There are some great kits out there, so I got to stay in my comfort zone.

However, when it comes to flavors, I've been told I am excellent, but I don't know if what I imagine is possible to recreate in a beer. A great experience, whether food or drink, engages all the senses, or as many as possible.

It has to look appealing. Who hasn't watched the cascading effect of a nitro pour? It's mesmerizing.

It has to smell good. Skunk-scented beer will never take off. However, herbal, hoppy, sweet, citrusy, fruity, and malty get your mouth watering and those taste buds anxious to try.

Texture? If you are drinking a light session beer, you don't want it to coat your mouth the same way a creamy stout lingers.

Sound? Many beers offer the distinctive sound of carbonation even after you've uncapped them. Crisp lagers sound different from a luscious stout.

Flavors? Treating the taste buds to a cupful of joy is the fun part. That is an area where, if you can imagine it, you can figure out how to "liquidate" it.

Craft beer has come a long way in creativity and flavors. Walk into any store,

So how do I approach a beer recipe as a chef, not as a master brewer?

Can I get sriracha and pineapple with hints of cilantro and lime into a beer, or should I just settle for going out for some Thai food and pairing a crisp ale with the meal?



and you'll find nut browns, milk stouts, fruity ales, lagers, and porters. Sour, tart, and spicy. Coffee, chocolatey, and maple bacon doughnut—. What? (Kudos to Rogue and Voodoo for that one. I can only imagine what might have led to that brewing adventure.)

Green chile beer from New Mexico? We love our green chile; we put it in and on everything. Rocky Mountain oyster stout? Yes, it is made with bull testicles and has a meaty mouthfeel.

So how do I approach a beer recipe as a chef, not as a master brewer? Can I get sriracha and pineapple with hints of cilantro and lime into a beer, or should I just settle for going out for some Thai food and pairing a crisp ale with the meal?

## PIÑON PORTER

Pineapple sriracha ale will have to wait; I want to make a piñon beer. Piñon refers to the edible seeds of *Pinus edulis*, a short pine tree native to the western United States. It's similar to Italian pinoli, which is a key ingredient in pesto. We have piñon aplenty in New Mexico. If we aren't smothering a dish with chile, we're sticking piñon in it.

I want to make several beers for winter, but porter provides the best challenge, and I absolutely love a good porter. Porter is simple, and it was a piñon-laced meal paired with porter that led to my idea.

I have tried the piñon coffee porter down at Rio Bravo Brewing Company, but I want to create a true piñon porter

with no extra flavors. I am pretty sure this will be a great combination, but to be sure, I run out to the store and pick up a bag of piñons and a plain porter.

I sit down, mash up a handful of piñon, take a sip of porter, and hold them together in my mouth. Seems pretty tasty.

At the store, besides the piñon coffee porter from Rio Bravo Brewing Company, I discover Rogue Hazelnut Brown Nectar and De La Vega's Pecan Beer; I see similarities, so I snatch up a sample of each kind. I decide to call my neighbors over for beer sampling with me.

All the samples are yummy, but only the pecan beer simulates what I want to create—nut and beer with no other additions.

Now, I head to the web to see if somewhere in the world, somebody has created a piñon beer. Pecan beer comes up in my search results, but no plain piñon—always piñon plus some other flavor.

As I read, I discover why. Piñons, like pecans, are fatty, and oil kills head development. As a chef, I was thinking more about flavor than chemistry, but this makes perfect sense. Now, I have a challenge and have to stretch my knowledge of brewing. A challenge that will push me out of my comfort zone. Several brewing boards discuss on how and when to add piñon into your beer.

I can add piñon to my beer in a few different ways, but the first step is always to roast the piñons to remove some of the oils. From there I can try three different methods:

- I could use a flavor extract. No one I've found so far makes a piñon extract. Santa Fe Spirits distills Atapiño liqueur (piñon, ponderosa, and oak), and I will get a bottle of it just for me, but it is whiskey based and not pure piñon, so I have to make my own. It is not difficult. In a pan, I dry roast 2 cups (worked out to be about 8 oz.) of raw shelled piñon nuts, and then I let them steep for several weeks in a quart-sized Mason jar with 4 cups of vodka.
- I could steep the nuts during the last five minutes of boiling the wort. This

# CORRALES PIÑON PORTER

Follow the basic recipe for a classic porter with the addition of piñon, or see the variation for a spiced twist.

**Batch Volume:** 5 US gallons (18.9 L)

**Original Gravity:** 1.048 (11.9° P)

**Final Gravity:** 1.013 (3.3° P)

**Bitterness:** 29 IBU

**Color:** 24 SRM

**Alcohol:** 4.6% by volume

## ADDITIONAL ITEMS

**12 oz.** (340 g) roasted piñon

## BREWING NOTES

Steep the malts in 3 gal. (11.4 L) of water for 30 minutes at 155° F (68° C). Remove the grains and add the malt extract and 1.5 oz. (43 g) of the hops. Stir the extract well, making sure it doesn't collect at the bottom and burn. Boil for 60 minutes total. During the last 5 minutes add the last 0.5 oz. (14 g) of the hops.

Cool the wort, transfer to a carboy, and add enough water to bring it to just a tad over 5 gal. (18.9 L). Add the yeast and ferment.

When fermentation has ended, put the roasted piñons in a muslin bag and let steep in the beer for no more than five days. Then remove piñons and let it sit for two more days before bottling or kegging.

## VARIATION

To make an orange spiced piñon porter, add 6 cinnamon sticks, 8–12 whole cloves, 2–3 star anise, and 2 Tbsp. (227 g) dried orange peel to the secondary along with the piñons.

begins to sound complicated, and maybe the oils would kill the beer.

- I could add a bag of roasted nuts in during secondary fermentation. This sounds messy.

The extract method seems the easiest, and chemically, it might be the best way to minimize possible effects of piñon oils on head retention and mouthfeel. I decide to create a piñon extract, whether or not I use it in my beer, because my brain is way ahead of me on how to use it in other recipes.

Bourbon sounds so delicious. Piñon bourbon porter—the idea makes my mouth water and conjures images of sitting by a fire on a crisp, cold night with a bowl of stew or a burger (with bacon). However, I am aiming for piñon, so I choose vodka for a pure flavor.

I need to consider my experience level when looking at all the options. I don't want to dump 5 gallons of beer into the compost bin. I don't get to brew often, and I feel uncomfortable and have trouble remembering the process of brewing, so I begin to think this is far over my head and I need to just hand this idea off to a friend.

Too many choices and I have no clue. I am the flavor-combination-dreaming chef, so I start calling on more experienced brewers. I get the same answers to what I could do, and no one really has the time to go in depth. I head over to the local brewing supply store, Southwest Grape & Grain in Albuquerque, and I talk with Jerry. I show him my recipe and tell him my plan.

We talk about the process and all the options I have to add the flavor, and

I sit down, mash up a handful of piñon, take a sip of porter, and hold them together in my mouth. Seems pretty tasty.



the scariest third option of leaving a bag of roasted piñon in the wort during fermentation seems the best way to get a lot of piñon flavor. He talks me through it; I think I can do this—I mentally put down the paper bag I was hyperventilating into.

Then I start to ask questions about every item on my list. My basic recipe calls for chocolate malt, and I wondered if that would overpower the piñon.

"You can remove that malt from the recipe," he explains.

"Do I need this or this?" I pelt him with never-ending questions, and he patiently answers all of them.

I read every description on the different hops, and I get caught up in the flavor combinations. Cedar, earthy, elderberry, caramel. I begin to question—should I use a different hop than the Fuggles I usually use?

Jerry reels in my runaway imagination. "If you want a pure piñon flavor and nothing else clouding that, then stay with the Fuggles. It is clean and simple. You were right the first time." I nod and walk away from the hops fridge.

Poor Jerry has to do this again when I go to the malt room in the back and am confronted with a wall of different flavors. However, I walk out with the grain malts on my list, with the subtraction of chocolate malt and the addition of Carapils dextrin malt for head development.

So, did it turn out? Well, it's not done yet, but it smells good and tastes good. Very much an earthy, roasted nut flavor. I expected it to be sweeter, naturally, but it tastes like piñon. I pulled out the piñons, and it is still sitting. I will bottle it this weekend.

Next time, I will use the chocolate malt and introduce some spice—cinnamon, clove, and star anise. Hmm, that sounds really good, like the New Mexico state cookie, the biscochito. I also want to intensify the chocolate and add orange peel.

# BOURBON PIÑON WEE HEAVY

Scotland to New Mexico  
by way of Kentucky.

**Batch Volume:** 5 US gallons (18.9 L)  
**Original Gravity:** 1.091 (21.8° P)  
**Final Gravity:** 1.026 (6.6° P)  
**Bitterness:** 31 IBU  
**Color:** 26 SRM  
**Alcohol:** 8.7% by volume

## MALTS

**6 lb.** (2.72 kg) Munich liquid malt extract  
**6 lb.** (2.72 kg) pale liquid malt extract  
**4 oz.** (113 g) crystal malt 120° L  
**4 oz.** (113 g) English crystal malt 17° L  
**4 oz.** (113 g) roasted barley  
**4 oz.** (113 g) Special B malt  
**2 oz.** (57 g) chocolate malt

## HOPS

**1 oz.** (28 g) Northern Brewer, 8.5% a.a. @ 60 min  
**0.5 oz.** (14 g) Willamette, 5.5% a.a. @ 30 min

## YEAST

Wyeast 1728 Scottish Ale yeast

## ADDITIONAL ITEMS

**2 oz.** (57 g) oak chips soaked in 12 oz. (355 mL) piñon bourbon extract (see notes below)  
**2** vanilla beans

## BREWING NOTES

Steep grains for 60 minutes at 155° F (68° C), turn off the heat, stir in the malt extract, and dissolve completely. Return wort to the heat and boil for 90 minutes. Add Northern Brewer hops when 60 minutes are left in the boil. When 30 minutes remain, add the Willamette hops.

Chill wort to 55–60° F (13–16° C), and add enough water to bring the batch volume up to 5.25 gallons (19.9 L). Pitch yeast and allow to ferment for three weeks. While beer is fermenting, prepare the piñon bourbon extract and soak oak chips.

Transfer to a secondary carboy and chill to 40° F (4° C). Add the piñon-bourbon-soaked wood chips and vanilla beans in a muslin bag, leaving the bourbon, and let that ferment for another three weeks.

## PIÑON BOURBON EXTRACT

**8 oz.** (227 g) roasted piñons  
**4 cups** (947 mL) Maker's Mark bourbon whiskey

To make bourbon extract, combine whiskey and piñons and allow to rest for 7–14 days or until desired flavor is achieved.

And, once again, my mind is off, imagining flavor combinations. I could rattle them off all day, the flavor think-tanker. Oh, doesn't bourbon piñon Scotch ale sound good?

The liquor extract I made, just in case, is liquid roasted piñon with a kick, and I did learn a handy trick that, when I read it made me think, "Well, that is so smart. Of course!" Instead of chewing a handful of nuts (or spice) and taking a sip of beer, you can make an extract and add that to

a beer to test out flavor combinations. I learn something new every day.

**Heather Linderfelt is a geologist, chef, and freelance editor and writer based in New Mexico. She has a degree in geology from New Mexico Institute of Mining and Technology and a pastry certificate from Le Cordon Bleu in London. In addition to beer, she writes on a variety of topics, including business, technology, food, and health and wellness. Contact her at [hlinderfelt@gmail.com](mailto:hlinderfelt@gmail.com).**

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# Florida Weisse

Tart, Fruity, and Refreshing

By Mark Tumarkin



**N**o one can say the beer world isn't trendy. There's always a style du jour; some come and go, while others have more legs. Here in Florida, there's no shortage of trendy, and one of the trendiest these days is Florida weisse.

My homebrew club, Hogtown Brewers (2016 Radegast Club of the Year) of Gainesville, Fla., recently organized an event called "Florida Weisse and Beyond," which brought our brewing community together to learn about Florida weisse at Cypress & Grove Brewing Co. Pro brewers from Alligator, Blackadder, Cypress

& Grove, First Magnitude, Halpatter, High Springs, Infinite Ale Works, and Swamp Head joined us to discuss Florida weisse, which is a Berliner weisse with copious amounts of tropical fruit added.

Each brewer introduced themselves, their brewery, and their beer. We all tasted the beer while the brewer explained their brewing process and

what they were trying to achieve. Each brewer then took questions from the club members. Rinse and repeat for each brewery.



**Top to bottom: Eric Dreyer of First Magnitude Brewing Co., Craig Birkmaier of Infinite Ale Works, and Jonny Frazier and Ali Perbtani of Halpatter Brewing Co.**

## Berliner Weisse: The OG (and IBU and SRM)

Berliner weisse, Florida weisse's progenitor, is one of the lightest beer styles in both color (2 to 3 SRM) and alcohol content (2.8 to 3.8% ABV). Such low alcohol means correspondingly low original and final gravities of 1.028 to 1.032 and 1.003 to 1.006, respectively. With bitterness of just 3 to 8 IBU, there's no discernable hop character in Berliner weisse. When it comes to extreme brewing, this style is at the low end of the spectrum.

Berliner weisse is a great table beer that pairs well with many foods thanks to its tart, highly carbonated, bone dry disposition that layers clean lactic sourness atop a soft wheat foundation. Tart acidity, a dry finish, and high carbonation offer refreshment, while the low alcohol makes for an extremely drinkable session beer.

Like the beer itself, the history of Berliner weisse is a bit cloudy. It's an old-style wheat beer that dates at least to the 16th century (Horst Dornbusch offers 1572 as the earliest documented date for the style in Berlin). Oft mentioned are Cord Broihan, a brewer from Hamburg, and the early Huguenots who brought sour Flanders-style wheat beers to Germany as they fled Catholic persecution.

Napoleon's troops called Berliner weisse the "Champagne of the North" because of its bright, bubbly nature. Those early Berliner beers were not boiled and were fermented with a blend of *Lactobacillus*, *Brettanomyces*, and *Saccharomyces*. Kegs or clay vessels of the stuff were often buried in the ground to age, giving Lacto and Brett time to express themselves.

Berliner weisse reached the height of its popularity in the 19th century. German immigrants—best known for bringing lagers—even brewed Berliner weisse beers in Texas in the late 1800s. But by the 20th century, only a handful of breweries still produced the style. Professor Fritz Briem 1809 Berliner (which is unfiltered and unpasteurized), Kindl-Schluthiess Berliner Kindl Weisse, and Bayerischer

Banhof Berliner-Style Weisse are among the few remaining large German examples, but new Berlin breweries like Schneeeule, Brewbaker, Brauhaus Lemke, and Bogk-Bier are reviving the traditional Berliner weisse.

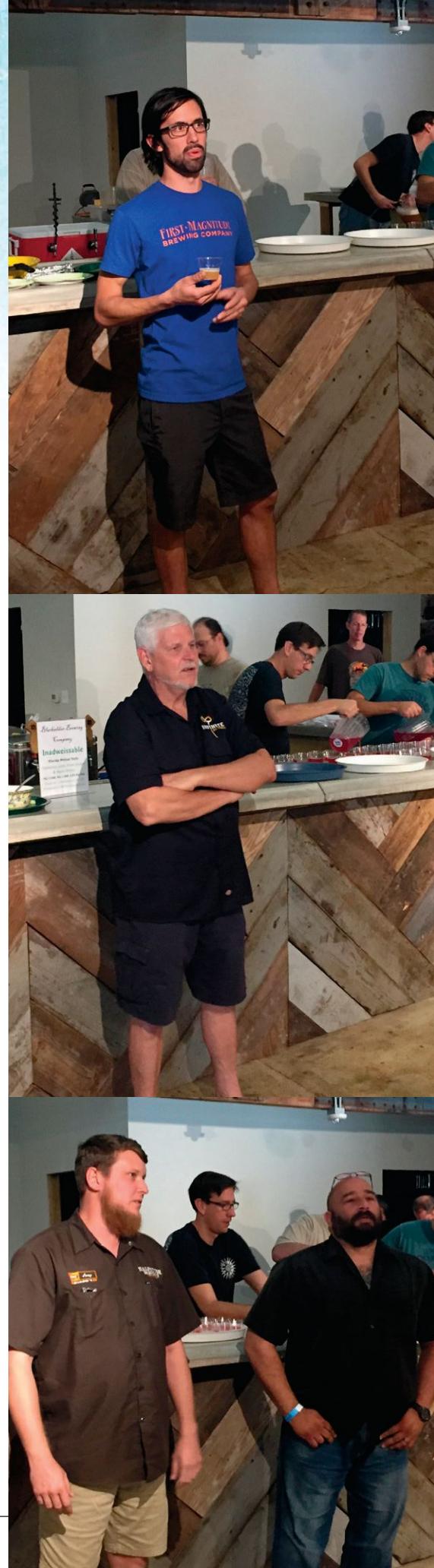
While those small brewers insist that a good, traditionally brewed Berliner weisse is best enjoyed unadulterated, Kindl and others are commonly served *mit Schuss*—dosed with a shot of bright red raspberry (*Himbeer*) or fluorescent green woodruff (*Waldmeister*) syrup. As Berliner weisse has taken off in the USA, some craft brewers have even developed their own uniquely flavored syrup shots to cut the lactic sourness.

## Ich Bin Ein Floridaner

Which brings us to Florida weisse. Doug Dozark first brewed Ich Bin Ein Rainbow Jelly Donut (RJD) at Peg's Cantina in Gulfport back in 2010 (Doug is now with Cycle Brewing in St. Petersburg). Instead of adding raspberry or woodruff syrup to the finished product in the glass, Doug added raspberries and limes right into the beer during production. That's key to this emergent style that offers tart, refreshing brews with deep fruit flavor and wildly crazy hues.

Shortly thereafter, Jonathan Wakefield (then still a homebrewer) brewed his Dragonfruit Passionfruit Weisse (DFPW) at Tampa's Cigar City for the first Hunahpu's Day, and it was off to the races for Florida weisse, as many began to call the style. Jonathan Wakefield credits Doug Dozark with coining the term.

Was it the luminescent colors, the fruited tartness, or the thirst-quenching drinkability that caused this new style to blow up? Probably some of each. It's a session beer and a gateway sour that's low in alcohol and high in flavor. Light and refreshing, it's perfect for drinking on the beach or pool deck under the hot Florida sun. The bright colors that made people ask, "What are you drinking?" certainly didn't hurt either. All these factors have contributed to the style's popularity.



# Stechen

*Florida weisse*

Contributed by Kiffin Ayers, High Springs Brewing Co.

Hot pink, tart, and refreshing. The cactus pear and kiwi merge to make a tasteful blend reminiscent of watermelon candy.

**Batch Volume:** 5 US gallons (18.9 L)

**Color:** 3 SRM

**Original Gravity:** 1.031 (7.8° P)

**Bitterness:** 0 IBU

**Final Gravity:** 1.008 (2.2° P)

**Alcohol:** 3% by volume

## MALTS

- 4 lb.** (1.81 kg) American white wheat malt
- 4 lb.** (1.81 kg) Pilsner malt

## YEAST

White Labs WLP672 *Lactobacillus brevis*

White Labs WLP029 German Ale/Kölsch

## ADDITIONAL ITEMS

- 1 Tablet** Whirlfloc added @ 15 min
- 4 lb.** (1.81 kg) kiwi, peeled and processed (secondary)
- 3.5 lb.** (1.59 kg) cactus pear, peeled and processed (secondary)
- 1 cup** (237 mL) Pilsner dried malt extract for starter wort

## BREWING NOTES

Prepare starter wort from 0.5 gal. (1.89 L) water and 1 cup (237 mL) Pilsner dried malt extract. Pitch *Lactobacillus brevis* to starter wort at 100° F (38° C) and hold temperature for 72 hours. On brew day, mash grains for 60 minutes at 155° F (68° C), lauter, sparge, and collect runoff. Do not boil. Reduce wort temperature to 100° F (38° C), add Lacto starter, and hold at 100° F (38° C) for 7 days. Boil soured wort 30 minutes and chill to 70° F (21° C). Pitch German Ale/Kölsch yeast and ferment 6 days at 70° F (21° C). Rack to secondary and add the cactus pear and kiwi. Allow to rest for an additional 10 days and then drop the temperature to 39° F (4° C) and condition for 1 week. Carbonate to 3 volumes (6 g/L) CO<sub>2</sub> and serve.

## EXTRACT VERSION

Replace malts with 4.4 lb. (2 kg) wheat liquid malt extract syrup. Dissolve extract completely in reverse osmosis water, top up to desired volume, add Lacto culture, and proceed as above.

Photos courtesy of Mark Tumarkin; Getty/merc67 (fruit)

Some are unhappy with the Florida weisse moniker (remember black IPA vs. Cascadian dark ale?), but it's catchier than Champagne of the South. As the name suggests, the style is most closely associated with the Sunshine State, but it certainly isn't restricted to Florida. Dogfish Head (Delaware) has brewed Festina Peche since 2007, and Deschutes (Oregon) has made Willamette Weisse with urban foraged

Scotch broom and red cedar leaves since 2013. Smuttynose (New Hampshire) has a Short Weisse series. Clearly, this style enjoys broad geographic appeal.

Regardless of where it originated or what you call it, we're well past having to say that, yes, Florida weisse is a thing. Word of this style spread rapidly, and brewers all over Florida began brewing these tart,

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**LALLEMAND**

# Swamp Head Florida Weisse

Berliner weisse with kiwi and lime

Contributed by Swamp Head Brewery

**Batch Volume:** 5 US gallons (18.9 L)

**Original Gravity:** 1.040 (10° P)

**Final Gravity:** 1.006 (1.5° P)

**Color:** 3 SRM

**Bitterness:** 5 IBU

**Alcohol:** 4.5% by volume

## MALTS

**3.5 lb.** (1.59 kg) Pilsner malt

**2.5 lb.** (1.13 kg) wheat malt

**2.25 lb.** (1.02 kg) flaked wheat

## HOPS

**0.18 oz.** (5 g) Sterling, 7% a.a.

@ 60 min

## WATER

Ca 32 ppm, Mg 19 ppm, Na 12 ppm,

SO<sub>4</sub> 90 ppm, Cl 28 ppm, HCO<sub>3</sub>

41 ppm

## YEAST

Omega Yeast Lactobacillus Blend

Wyeast 1318 London Ale III

## ADDITIONAL ITEMS

**1 lb.** (454 g) kiwi puree

**4 oz.** (120 mL) fresh kiwi juice

**0.2 oz.** (5 g) fresh lime zest

## BREWING NOTES

On brew day, mash grains for 60 minutes at 148° F (64° C), lauter, sparge, and collect runoff. Do not boil. Reduce wort temperature to 100° F (38° C), add Lacto, and hold at 100° F (38° C) for 7 days.

Boil soured wort 60 minutes, adding hops as indicated, chill to 66° F (19° C), and pitch London Ale III yeast. Ferment 3 days at 66° F (19° C), and then warm to 70° F (21° C). Add fruit puree, juice, and zest to secondary and condition for 3 days.

Carbonate to 2.6 volumes (5.2 g/L) CO<sub>2</sub>.

fruity, colorful beers. Cigar City came out with one simply called Florida Weisse with mango, banana, and strawberry. Florida brewers turn out more examples of the style than are made anywhere else. As Florida weisse's popularity increased, it even sprouted its own festival: Berliner Bash on the Bay at Peg's Cantina. This later moved to Green Bench in St. Petersburg and became Floridaweisse Bash. Jonathan Wakefield was one of the festival's founders, and has hosted the festival at J. Wakefield Brewery (in Miami). And of course, there's Cajun Cafe's Sour, Lambic & Berliner Weisse Festival (Pinellas Park). You can also find more than a few excellent examples of Florida weisse at our own Hogtown Craft Beer Fest ([hogtownbeerfest.com](http://hogtownbeerfest.com)).

## Fruitful Bounty

The term terroir is commonly associated with wine, but breweries and beer writers frequently invoke it to discuss locally grown ingredients. Terroir is really about a sense of place. Florida weisse makes good

use of Florida's many local fruits, which helps add to that sense of place.

We have an advantage here in the Sunshine State with the year-round availability of tropical fruits that grow in our backyards and fill our markets. That's critical, because Florida weisse is heavily fruited, with up to 3 pounds per gallon (360 g/L). Gordon Strong has written about a fruited, kettle-soured Brazilian style called Catharina Sour that is conceptually similar to Florida weisse.



To learn more about Catharina Sour, check out Gordon Strong's seminar "The Style Hunter" from Homebrew Con 2018 at [HomebrewCon.org](http://HomebrewCon.org).

Like Brazil, Florida has an abundance of tropical fruits. But even with this bounty, seasonal availability can be a problem. Many brewers get around this by preparing their fruit and then freezing it for later use.

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# Halpatter Florida Weisse

Traditional Berliner weisse style with Florida fruits.  
Contributed by Jonny Frazier, Halpatter Brewing Co.  
If you can't source mayhaw berries, you can substitute cranberries, as they are similar in flavor.

**Batch Volume:** 5 U.S. gallons (18.9 L)

**Original Gravity:** 1.037 (9.3° P)

**Final Gravity:** 1.009 (2.3° P)

**Color:** 2.8 SRM

**Bitterness:** 7.4 IBU

**Alcohol:** 3.6% by volume

## MALTS

**4.75 lb.** (2.15 kg) German Pilsner

**2 lb.** (907 g) flaked wheat

**2.5 oz** (71 g) rice hulls

## HOPS

**0.5 oz.** (14 g) Saaz, 3.5% a.a. @ 60 min

## YEAST

White Labs WLP029 German Ale/Kölsch Yeast  
50B cells *Lactobacillus plantarum* or 3 GoodBelly StraightShots

## ADDITIONAL ITEMS

**1.5 lb.** (680 g) frozen mayhaw berries, thawed (secondary)  
**Zest** of 1 navel orange (secondary)

## BREWING NOTES

Mash 20 minutes at 122° F (38° C), 40 minutes at 150° F (66° C), and then 10 minutes at 168° F (76° C) for mash out. Lauter, sparge, and collect runoff.

Boil wort 10 minutes to kill natural microbes on grain, cool to 100° F (38° C), and pitch *Lactobacillus*. Maintain this temperature until pH drops to 3.2–3.4 (several days), and then boil 60 minutes, adding hops as indicated.

Chill wort to 68° F (20° C) and ferment 10 days at this temperature. Raise temperature to 72° F (22° C) for a 3-day diacetyl rest. Rack to secondary, add thawed berries and orange zest, and condition for 1 week before carbonating to 2.7 volumes (5.4 g/L) CO<sub>2</sub>.

# Inadweissable

Florida weisse

Contributed by Chris Hart,  
head brewer at Blackadder Brewing Company

**Batch volume:** 11 US gallons (41.6 L)

**Original gravity:** 1.048 (11.9° P)

**Final gravity:** 1.008 (2.1° P)

**Color:** 2 SRM

**Bitterness:** 0 IBU

**Alcohol:** 5.5% by volume

## MALTS AND SUGARS

**10 lb.** (4.54 kg) Rahr Pilsner malt

**5 lb.** (2.27 kg) Rahr wheat malt

**1 lb.** (454 g) light agave nectar

## HOPS

1 hop pellet of your choice @ 0 min (2nd boil)

## WATER

Reverse osmosis water with approximately 5–7 ppm residual carbonates. Acidify sparge water to pH of 5.2

## YEAST

*Lactobacillus plantarum*, 200B cells

White Labs WLP510 Bastogne Belgian Ale Yeast, 100mL

## ADDITIONAL ITEMS

**1/4 tsp.** (1.25 mL) Five Star Super Moss @ 10 min (2nd boil)  
**2 tsp.** (10 mL) yeast nutrient @ 10 min (2nd boil)  
**1.25 lb.** (567 g) fresh ginger root, grated @ 0 min (2nd boil)  
**Juice** of 10 limes @ 0 min (2nd boil)  
**Zest** of 5 limes @ 0 min (2nd boil)

## BREWING NOTES

Mash malts 60 minutes at 150° F (66° C), lauter, sparge, and collect runoff. Boil 15 minutes (this is the first boil), add and dissolve the agave nectar, and chill to 95° F (35° C) for kettle souring. Pitch 200 billion cells of *L. plantarum* and maintain temperature of 95° F (35° C) for 48–72 hours, or until pH falls to 3.2–3.4.

Boil soured wort for 15 minutes (this is the second boil), adding the single hop pellet, juice, zest, and ginger at flameout. Chill wort to 67° F (° C) for *Saccharomyces* fermentation. Pitch Bastogne Ale Yeast, and ferment 7 days.

Bottle condition or keg and force carbonate to serve.

**Berliner weisse is a great table beer that pairs well with many foods thanks to its tart, highly carbonated, bone dry disposition that layers clean lactic sourness atop a soft wheat foundation.**

If you don't have fruit growing in your backyard, there are still many sources including farmer's markets, Latin and Asian markets, your local homebrew store, and even online retailers like Amazon. You can purchase fruit fresh or frozen, as purees and juices, or in concentrates. Approach your fruit choices in a creative and culinary manner.

**Brewing Florida Weisse**

Florida weisse is a simple style to brew. Most recipes use 25 to 60% wheat malt, with Pilsner malt forming the balance of the grain bill. Rice hulls can come in handy as a lautering aid with all that huskless, gummy wheat in the mix. A small hop addition, usually a German noble variety, is all that's needed to provide a few IBUs, although some brewers skip the hops altogether.

There are two primary ways to add acidity: using food-grade lactic acid or souring by lactic acid bacteria. A lactic acid addition is fast and simple, but lactic bacteria can be introduced easily enough from a pure culture pitch or a probiotic drink, pill, or yogurt. Souring can take place before the boil (sour worting or kettle souring) or during the main fermentation. (For more on sour wort techniques, see Homebrew Homecoming in the Jul/Aug 2018 issue of *Zymurgy*.)

*Lactobacillus delbrueckii* and *L. brevis* are the best choices for souring bacteria. Keep in mind that *Lactobacillus* is generally hop intolerant, which is one reason why Berliner weisse and Florida weisse have such low hopping rates.

Most modern Berliners and Floridaners are kettle soured for simplicity and quick turnaround. After mashing and collecting the runoff, you pitch your *Lactobacillus* and give it several days to sour the beer to a pH of 3.5 to 3.8. Some brewers conduct a brief boil before pitching the Lacto to kill off any unwanted naturally occurring microbes already in the wort.

Once souring is complete, you pasteurize the wort by boiling, which removes the danger of those bugs going wild in your brewhouse. *Brettanomyces* is used less often today than it once was (though the aforementioned Berlin craft breweries are changing that), but it does help create a more complex flavor profile.

When do you add the key ingredient: fruit? As with all fruit beers, you have choices. Many brewers feel that adding fruit after primary fermentation best preserves the fresh fruit aromas and subtleties. Others like to get the fruit right into the primary. Whatever you choose, don't be shy. Remember, Florida weisse is an extreme beer, and you'll want at least 1 to 3 pounds per gallon (100 to 400 g/L) to get intense fruit flavor and color.

Several commercial brewers have been kind enough to supply recipes to accompany this article, so you can try it for yourself. And when your beer is ready, don't forget to eat. Traditional Berliner weisse is a great companion for barbecue because the tart acidity cuts through the meaty, fatty goodness and refreshes the palate. Fruity Florida weisse tastes great on a sunny North Florida day out by the grill, especially with a tropical fruit-based sauce to slather on ribs or pulled pork.

**Mark Tumarkin has been a homebrewer for over 20 years and a BJCP Certified judge for almost as long. He has served multiple terms as the Primary Fermenter (President) of his club, the Radegast Award-winning Hogtown Brewers, and he has served as a member and chair of the AHA Governing Committee. He was a member of the committee that undertook the 2003–2004 update of the BJCP Style Guidelines. For the last six years, he has been living the dream of all beer, all the time as a sales rep for Micro Man Distributors.**

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# HOMEBREW COMPETITIONS

*as* ENTERTAINMENT



By Karl Summerfield



The New Zealand Homebrewers' Conference has attracted some of the best-known names in homebrewing.

## IN JULY 2015—WINTER IN NEW ZEALAND—ED, MIKE, AND I HAD A PROBLEM. THE THREE OF US WERE PLANNING TO RUN THE FIRST NEW ZEALAND HOMEBREWERS' CONFERENCE IN JUST OVER SIX MONTHS' TIME, AND WE NEEDED SERIOUS BUY-IN FROM THE NATION'S HOMEBREWERS TO MAKE IT HAPPEN.

On the face of it, the plan was unlikely to succeed. Despite being relatively well-known in our hometown of Nelson—Mike and Ed run the local homebrew shop, and I run a popular homebrew blog—we had very little profile outside of the region. None of us had attended a homebrew conference before or been involved in any kind of event management. All three of us had

full-time jobs, and the budget for the event was basically zero.

A few factors were in our favor, though. Nelson is the heart of New Zealand's hop industry and a popular tourist destination with a well-established annual craft beer festival. We decided to hold the conference in Nelson as a weekend event with

a range of activities for the avid homebrewer. We built a conference around the drawcards of John Palmer, Chris White, Chris Colby, Mike "Tasty" McDole, and James Spencer. We added a large homebrew hub to the beer festival, and bus tours offered behind-the-scenes access to the hop industry at harvest time: surely a package to motivate any homebrewer!



The real problem was the homebrew competition. New Zealand already had a successful national competition based on the BJCP approach. As great as such events are for helping people brew better beer, this competition format requires a committed pool of expert judges, something that would be hard to organize in small-town Nelson. Perhaps more importantly, a closed-door competition would have done nothing to add to the party atmosphere of the weekend or encourage more people to travel to Nelson.

So, the challenge was set. How could we design a homebrew competition that would be fun to watch and involve everyone who showed up?

### BREWMANIA'S BLACK MAGIC

We decided on three important concepts.

1. We wanted to identify a *champion brewer*, not just the best beer.
2. We wanted judging to offer an enjoyable, entertaining experience that would take place in one evening and be open to anyone who wanted to be part of it.
3. Perhaps most challenging, we wanted a scalable format that could accommodate however many brewers entered the competition and the number of people who would turn up and want to judge.

After much talking, meditation, and beer, we announced the concept of BrewMania to the unsuspecting brewers of New Zealand, describing it as part chess tournament and part Mexican wrestling.

If you want to participate in BrewMania as a brewer or a judge, there really is nothing you need to know. However, there's a lot going on under the hood. We've never been particularly secretive about how the event works, but we have learned that even those who have more than idle curiosity quite often decide that they would rather accept it as black magic than spend time getting to grips with the math.

The math involved is no more advanced than anything a high-school student might face. It incorporates various aspects of bracket competitions, ladder tournaments, and statistics, all of which have been selected to achieve the three key concepts described, and to make it as easy as possible for brewers to take part.

In a perfect world, every judge would taste every beer. However, if you want an event that can accommodate 120 judges, then even with samples of only 1 oz. (30 mL), every brewer would need to provide close to a gallon (3.8 L) of each beer. And if 100 brewers entered three beers each, every judge would be faced with three hundred different samples and over two gallons (7.6 L) of beer to assess. Fun? Probably. Meaningful and memorable? Probably not.

Thus, the competition is built around tables. Judges at each table are tasked with democratically identifying the best and worst beers in front of them. There is no attempt to make flights style-specific, so a table could have a mix of barleywines, cream ales, and Belgian wits. There can be a lot of fun discussion at the table to work out which brewers should be rewarded with votes.

Each participant submits nine bottles: three bottles each of three different beers. Entrants are asked to designate which of the three unique beers should be assigned to three different elimination rounds. So, you might enter, say, a stout for Round 1, a saison for Round 2, and an IPA for Round 3. (There's a parallel process for entrants who only want to enter one or two beers, but we won't detail that here.)

All the Round 1 entries are assigned to judging tables. If there are 80 entries and 10 judging tables, then each table gets eight beers. Every judge who evaluates beer at a table is given tokens to assign to those beers, specifically one less token than the number of beers. At a table with eight beers, each judge gets seven tokens.

Once all judges have allocated their votes, tokens are counted, and the lowest-scoring beer from each table is eliminated from the competition. Furthermore—and this is key—that brewer's Round 2 and Round 3 entries are also eliminated. Once you're out of the main competition, you're out.

All brewers whose Round 1 beers survive remain in Round 2. So, if your hypothetical Round 1 stout made it, then your hypothetical saison would now be up for evaluation in Round 2. The same process as before takes place again: tokens are allocated, and brewers whose beers come up short are eliminated.

If your Round 2 saison survived, then now your IPA would continue into the third round of the competition. Round 3 once again proceeds according to the same voting process and tokens are tallied.

If you're still in after Round 3, now all three of your beers—the stout, saison, and IPA—make an encore in the Final Round. The competition is organized so that twice as many brewers remain as there are tables. Thus, all three of your beers are now pitted head-to-head against another brewer's three beers at a single table, which is why you needed a second bottle. Each table is challenged with picking which of its two brewers' three beers are best.

In our hypothetical competition with 10 tables, 10 brewers' beers would survive and go on to be judged by a small expert panel, which is where the third bottle comes in. The last brewer standing after the expert panel is BrewMania champion.

### MAIDEN FLIGHT

In March 2016, on the first day of the first New Zealand Homebrewers' Conference, 108 people judged around 140 beers from more than 40 different brewers from around New Zealand.

There was no shortage of stress and drama for our team. Two weeks before the event,



Art, science, and statistics meet at the New Zealand Homebrewers' Conference.



Beer Distribution Table 6 Finals		
JudgingNumber	Name	ABV
A1	Hopeless American - APA	4
A2	ChinChiller Tiramisu - Stout	5
A3	ChinChiller Milk- Stout	5
B1	Any IPA	6
B2	Amber Ale	5
B3	Riwaka Pale Ale	5

100 judging tickets had been sold, but hardly any beer entries had been registered. The whole event was run using spreadsheets and manual data entry developed and operated by the one person who understood them on the day before his second child was due to be born. The MC for the event—the unflappable James Spencer—was heavily jetlagged and had just 40 minutes of briefing to get the mechanics of the thing clear in his mind before BrewMania took off.

The plan on how to efficiently serve beer to the whole room changed dramatically

within the first five minutes. The event ran slower than anticipated while we manually entered scores and hand-created table-serving sheets. We served the final beer 15 minutes before the alcohol license for the venue expired.

But did it fly? As the manic evening ended, standing amidst a sea of empty beer glasses and smiling faces, Ed, Mike, and I received a standing ovation from the crowd. BrewMania was here to stay.

## REFINEMENT

We continued to develop the BrewMania

concept and organized it for the third time in March 2018. The event has become a key part of the New Zealand Homebrewers' Conference. Record participation in this year's BrewMania was no doubt helped by the first-place prize for the champion brewer: a free trip to Homebrew Con in Portland.

The core concepts described remain, but we've made significant improvements to the operation. These days, everything is run through custom-built software. From accepting registrations and generating table-serving plans to entering scores, displaying scoreboards at the event, and emailing results afterward, all the black magic has been automated. This leaves event organizers to focus on nothing more than making sure the beers keep getting poured and everyone has a good time.

A singles competition that runs simultaneously has also been embedded. Brewers who don't have three beers ready can enter just one or two, and their beers are scored alongside the unjudged entries of eliminated brewers of the main competition.

One trick still up our sleeves is for commercial beer, when production volume is no longer a limitation. Inspired by this, Mike, Ed, and I have developed a revised format through which a large room of people can judge 20 or 30 different beer samples and democratically elect a champion brewer after every person has tasted every beer. We hope to road test this concept in early 2019.

## BREWMANIA USA?

For our team, one of the most memorable parts of running the New Zealand Homebrewers' Conference has been the opportunity to spend time with the big names of the global homebrewing scene, to hang out with those who write the blogs, pen the books, and record the podcasts that homebrewers love to listen to. Every year, we have asked these VIP guests to run the expert judging panel at BrewMania, and every year we've been told that this event format is a totally unique, great way to have a social and fun homebrew competition. Buoyed by this, we are

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excited to work with homebrew clubs and organizations anywhere who are interested in running a BrewMania event.

Shifting homebrew competitions from the traditional approach of closed-door judging by expert panels to a fun, social, participatory event is a significant change. The combination of people with a passion for homebrewing, a broad selection of beers to taste and evaluate, and the excitement of competing is a natural fit for a rewarding and fun event. Closed-door judging will always have its place. However, it is exciting to consider the potential of competition formats that focus on this more hedonistic approach.

**Karl Summerfield is an organizer of the New Zealand Homebrewers' Conference. BrewMania is an original concept developed by BrewEvents, organizers of the New Zealand Homebrewers' Conference. Contact info@nzhc.nz for opportunities to collaborate on this concept.**

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**Greg Young**  
**Roseville, Calif.**  
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Greg Young grew up and lives in Roseville, Calif., with his wife and two daughters. Young grew up racing motorcycles and enjoyed all types of motorsports. His racing journeys took him all over California,

and frequently to Chico, where he was first exposed to craft beer at Sierra Nevada Brewing Co. The gorgeous copper kettles shining through the giant front windows always fascinated him, but their size suggested brewing beer at home was impossible. Then, in 2015, his wife bought him a homebrewing kit for Christmas.

"I remember being shocked with myself, that after all these years of enjoying craft beer, I never thought to find out if you could make beer at home," Young says. He bought John Palmer's *How to Brew* and read it cover to cover. He decided to bypass extract kits and converted an old water cooler into a mash tun. "I figured that since all-grain was the way it is done on the professional scale, I was going to do it that way from the beginning."

He brewed his very first batch at the end of January 2016 and was immediately hooked. "The process and the science, or at least what I understood at the time, sucked me in and consumed me. I went all in, borderline obsessed, reading and learning everything I could to figure out how to not only make beer, but to make quality beer."

When it came to the 2018 National Homebrew Competition, Young decided to

only enter lagers. "I really wanted to focus on lagers for a few reasons, but the main reason was to challenge myself. With nothing to hide behind, I had to really make sure my process was sound, my ingredients were fresh, and my fermentation was spot on."

Young's two final-round beers were an American lager and an international pale lager. "I first brewed the Mexican lager for a good friend's birthday in 2017. The American lager was first brewed in the beginning of 2018 specifically for the competitions I planned to enter." His goal was to craft light, clean beers with an added touch of personality that anyone from die-hard craft lovers to those who only drank macro could appreciate.

The two beers were different in recipe development, but both were adjunct beers that used flaked rice and/or flaked corn to lighten body and improve drinkability. From there, the American lager was lightly hopped with a late addition to contribute the slightest hint of additional character. Fermented with White Labs American Lager yeast, this beer went through a long fermentation process, which contributed to the clean profile of the beer. The international pale lager was hopped with a big charge of Saaz hops at the end to enhance the spicy hop character and



wrap everything together into a craft version of a Mexican lager. Fermented with White Labs Mexican Lager yeast, this beer went through the same fermentation process as all other of Young's lagers.

"Greg Noonan's lager book was a huge resource for me. Incorporating the traditional methods and fermentation processes that have produced amazing lagers over all these years, I think it really helped me step up my game." Along with Noonan, he credits the Brewing Elements series of books by Brewers Publications, The Brewing Network, and various people he has met along the way as vital resources in his growth and learning.

"There's so much information out there, it can be overwhelming at times and difficult to identify what is true and what's not. What has worked for me is if I find something that I feel has a chance of improving my process, I try it. There's a reason there's so much information out there; there are techniques that will work for some people, but definitely not for all."

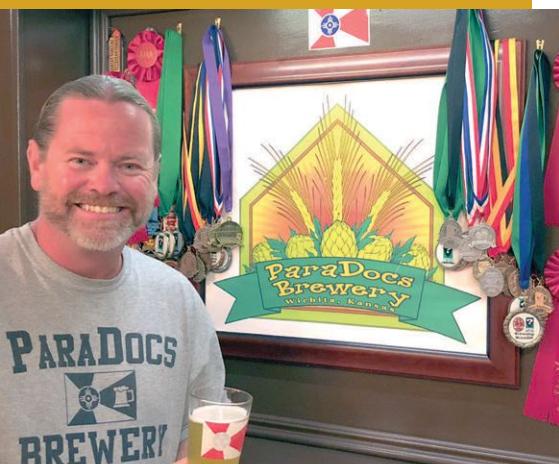
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Another item that Young contributes to his success is being true with himself

when sampling his beer, and really trying to pick out the subtle nuances with each style.

"Calibrate yourself to the classic examples. Anytime I was developing a recipe or even sampling a beer I created..., I would pull up the BJCP style guidelines, judge my beer based on the parameters set, and also buy the classic examples listed and do a side-by-side tasting. I knew my beer wouldn't taste exactly like certain examples, and I didn't necessarily want that, but while reading through the style guidelines and picking out pieces that I felt were important to hit, I feel I was able to really tailor my craft."

## Homebrewer of the Year



**Michael Rogers**  
*Wichita, Kan.*

Homebrewer of the Year goes to the brewer of the Best of Show beer from 33 categories.

Michael Rogers began homebrewing after his wife Nicole bought him some basic brewing equipment and an extract kit as a present when they lived in Austin, Texas in 1996.

"The experience was rewarding, and the beer was drinkable, so I continued to occasionally brew extracts over the next 13 years," he remembers. "My desire to brew was usually outweighed by my lack

of enthusiasm for bottling." But another gift from his wife in 2009 proved to be a major upgrade that reinvigorated his interest in the hobby.

"The kegerator ... allowed me to avoid the part of brewing that I liked least, so I started to brew more often and had beer available in three kegs. After another year, I realized that I could make good extract beers, but if I wanted to make great beer, I needed to start mashing. After doing a lot of reading, I felt I was ready to make the switch."

He started doing partial mashes but soon switched to all-grain. "My brewing options increased tremendously, as did the quality of my beer. I have since added an under-counter cooler and now brew 30 to 40 times a year to maintain six to eight beers on tap."

Rogers' background in science complements his hobby. "I have a PhD in exercise physiology and have been a professor at Wichita State University for 20 years," he explains. "Although my research is on the benefits of exercise for older adults, I have background in exercise biochemistry, particularly in the areas of carbohydrate and protein metabolism. My students would say it is clearly my favorite subject to teach because of my passion for this complicated topic."

His ability to explain it on a level they can appreciate even includes a section comparing glycolysis in humans to yeast during fermentation. "My biochemistry background has been invaluable, allowing me to really appreciate the science of brewing. However, the art of brewing is what I really enjoy."

He has dubbed his homebrewing operation ParaDocs Brewery. "My wife also has a doctorate, so we are a pair of docs. We label ourselves 'Your award-winning neighborhood brewery' and are quite popular with the neighbors and other friends (perhaps because the beer is free for them). I do the brewing, run our social media, and do the artwork for our logo, labels, and T-shirts. Nicole specializes in the initial in-house tasting analysis. Although occasionally critical, the best compliment she can give is when she says she would buy the beer if it were commercially available."

Rogers entered his first competition in 2012 on a whim. "It was held in Wichita and I learned about it a few days before the entry deadline. I entered what I had available and won three medals. Since then I have entered two to three competitions a year and have earned more than 30 medals. Honestly, I have entered more losing beers than that, but the feedback is almost always helpful. After qualifying



## 2018 NATIONAL HOMEBREW COMPETITION

for the Nationals four times, I am thrilled to have finally placed. Being named Homebrewer of the Year is surreal and may never sink in."

His beer for this competition, Nuclear Winter, was a white IPA. "It is based on a recipe that appeared in a 2012 issue of *Zymurgy*. I have brewed it at least 20 times since then and have continued to tweak it nearly every time. It is a favorite style of mine, particularly since it is usually a spring beer and to me it is one of the first signs that winter is ending.... I call it Nuclear Winter because I think it would still be a great beer

to enjoy if we were looking towards the end of a winter caused by nuclear fallout, but I hope to never test that theory."

The main components of his brewing system are not complicated. "I still use a 10-gallon cooler to mash. I use Wichita tap water that I don't treat. I batch sparge. I use a 50-foot copper immersion wort chiller. However, there are many minor procedures that I have adopted over the years through trial and (a lot of) error.

"My advice is that once you get your process down and aren't making mis-

takes with sanitation and yeast health, then start to fiddle with the little things that can make a big difference. Brew as often as you can, and always be thinking about how you can improve. Play with different hop profiles, including dry hopping, fermentation temperatures, base and crystal malts, off-recipe types of yeast, etc. Change one thing at a time so you can identify what worked and what did not, even when adding new equipment or techniques to your brewing process. You have to be diligent and patient to make great beer, but it is very possible."

### Cidermaker of the Year



**Nathan Williams**  
**Somerville, Mass.**  
Boston Wort Processors

Cidermaker of the Year goes to the maker of the Best of Show cider from two cider categories.

Nathan Williams started intentionally fermenting beverages in 1999, when his new roommates invited him to help brew. Williams' father was an enthusiastic, adventurous home winemaker, so a basement full of bubbling carboys seemed completely normal, and he quickly picked up the hobby and ran with it.

While living in western Massachusetts in 2004, he started going to what was

then a small event, Franklin County Cider Days. This sparked an interest in cidermaking, and in addition to returning to that event regularly, he began making cider at least annually and has continued ever since. Fortunately, there are several excellent apple orchards in the area.

A vacation to Montreal in the winter of 2006 (which, Williams asserted, was just as cold as it sounds) introduced him to the ice cider of that region. At the time, ice cider was little known in the United States, certainly not something that was readily available for purchase.

"Making what you can't find is a major motivation," Williams stated. He started experimenting with techniques for production on a home scale. This led to giving a talk at the 2014 Homebrew Con and an article in the 2014 Nov/Dec issue of *Zymurgy*. The cider that yielded the Cidermaker of the Year award is an ice cider following the same process.

Williams is married with one child and holds down a day job as a software engineer. He enjoys being able to tinker at a hobby and has no desire to go pro and start his own commercial cidery or brewery.

Unlike many gold-medal cider recipes that have graced the pages of *Zymurgy*, Williams' ice cider is devoid of nutrients, clarifiers, or stabilizers, but he said that was by design.

"I've used Safcider [yeast], but carefully. One of the issues with ice cider is that you don't want to ferment dry—stopping somewhere in the 1.030 to 1.050 range is usually desirable—and nutrient limitation can be a powerful tool in stopping fermentation where you want it. Otherwise you have to resort to sterile filtration or additives like potassium sorbate. Clarifiers haven't seemed necessary."

Apple varieties are also left unspecified in his recipe. When asked if there were any particular dessert apples that worked best with ice cider, Williams responded, "This is a theme of the article. While standard cider benefits from limiting the dessert apples in order to have a good flavor balance and structure, ice cider usually operates on a slightly different axis—sweetness versus acidity—and doesn't depend on the flavors of the classic cider apples."

Because dessert apples are preferred for ice cider, Williams believes it is a good style for amateur cidermakers. Dessert apples are, after all, more widely available than apples selected specifically for cidermaking.

A technique commonly used in cidermaking is back-sweetening. Ice cider is intentionally sweet, but what about adding acids or tannins to adjust the balance of the finished beverage?

"Tannin is a very minor player in ice cider, so nothing there," Williams explained. "I haven't adjusted acid directly; I think it's



preferable to adjust the balance by fermenting a little more or less."

Finally, if you are going to go to the trouble of freezing cider to concentrate it, why not freeze it after fermentation? But Williams answered that that process was not an

apples-to-apples comparison. "It's a totally different product when you freeze-concentrate after fermentation," he said. "That product is usually known as applejack. It's essentially a form of distillation at that point, and you have all the flavor headaches that brings, plus you'd be starting with some-

thing that fermented dry and wouldn't get the sweetness to balance against anything."

For greater detail and a full rundown on making this delicious beverage, see Williams' article "Frozen: Making Ice Cider" in the Nov/Dec 2014 issue of *Zymurgy*.

## Meadmaker of the Year



**Michael Wilcox**  
**Wichita, Kan.**  
Kansas City Bier Meisters

Meadmaker of the Year goes to the maker of the Best of Show mead from three mead categories.

*Michael Wilcox shared last year's Cidermaker of the Year award with Amy Satterlund; his bio can be found in the Sept/Oct 2017 issue of *Zymurgy*. Michael was gracious enough to share extensive notes on his best-of-show Ode to Jadwiga mead. The full text can be found at [HomebrewersAssociation.org/s018](http://HomebrewersAssociation.org/s018).*

It would not be a stretch to say this mead is most of the reason I make mead, wine, beer, and cider.

Around 14 years ago, my future wife Pam and I first tasted Apis Poltorak Jadwiga, a sweet, rich Polish mead that includes raspberries, rose hips, 16% ABV, and several years of aging in barrels. There are sherry and raisin characters, muted raspberry, and

a body that could be called opulent without exaggeration. A true nectar of the gods.

Polish mead styles are differentiated by how much honey they use. At the top are Dwojniak, featuring one part honey to one part water, and Poltorak, with an incredible two parts honey to one part water. It eventually became apparent that I could not accurately make a Poltorak, at least not without significant amounts of fortifying. (Commercial examples can legally be fortified.) However, I thought I could make something at the upper end of Dwojniak and, after experimentation with white sugar and various yeasts, confirmed it.

After a couple years I was ready to try it. It isn't a clone, but Jadwiga was the biggest inspiration. Compared to Jadwiga, what I entered is less sweet and more drinkable, features significantly more raspberry, and has no rose hips. It is approximately nine years old, several batches blended together, and micro-oxidation has become a big part of the flavor profile. If I ever truly master it, I may write something up on intentional oxidation. The word oxidation is often thought of as negative, however it is a big part of flavor development.

We want oxidation, but not too much, too fast. In my experience, sack strength helps protect things from happening too fast. So, we leave some head space, but not a half-empty carboy. Individual micro-oxidation flavor development changes are tiny but will eventually become a significant part of the flavor. Leaving your mead on a 71B cake until it tastes like autolyzed yeast is not the same thing, so do it slowly. Blend with other batches for complexity. If you want to experiment, caramelize a small percentage



See Michael Wilcox's full mead notes at [HomebrewersAssociation.org/s018](http://HomebrewersAssociation.org/s018)

of the honey to help reinforce the aged flavor. This is something I started doing after some experiments with intentionally oxidizing Madeira with heat, but note I didn't say *burn* the honey. Plan to need at least three years, preferably five or more.

Don't go into competition expecting much. Polish styles aren't well known, and even after extensive research, I only know a little. (Any Polish readers are welcome to send me more examples.) Requests from judges for more raspberry are common. After many years of aging, some judges may argue that it isn't sack. Ignore it—like the mead, those judges will improve with time. Be careful identifying it as "intentionally oxidized." Some judges interpret this to mean "sherry" and seem to look for a more overt sherry-like aldehyde character of nuts and green apples. These are there, but they're part of a bigger, complex whole, not nearly as high as most actual sherry.

I drink this mead at room temperature, and unlike many other long-term projects, I drink it at least weekly and rarely share it. It has flavors of aged raspberry; caramelized sugars; a bit of molasses, raisin, and other dried fruit; fairly high acidity, mostly hidden by sweetness; and a big, decadent mouthfeel with tons of honey character and ever-present alcohol without being too hot. Of about 600 batches of stuff fermented, this is what I consider my best, and it is easily what I'm proudest of. Pam was a big fan, so if you do make this, raise a glass to her or anyone else who was taken from us too soon.



## 2018 NATIONAL HOMEBREW COMPETITION

### Gambrinus Club Award



#### North Seattle Homebrew Club Seattle, Wash.

The Gambrinus Club Award, now in its 10th year, recognizes clubs that achieve the most success in the National Homebrew Competition. Clubs are awarded six points for Final-Round gold medals, four points for silver medals, and two points for bronze medals. The award goes to the club with the highest total number of points per number of Final-Round entries.

To be eligible, at least five club members must enter the First Round. At least two of those members must advance to the Final Round, where at least one must place in the top three.

The 2018 Gambrinus Club Award went to the North Seattle Homebrew Club (NSHC) of Seattle, Wash. NSHC members Andrew Williams and Annie Johnson, both of Seattle, took silver medals in Category 27: American Wild Ale and Category 32: Standard Cider & Perry, respectively.

North Seattle Homebrew Club (NSHC) was started in 2001 when Bob Blade posted a flyer at the local homebrew shop asking if anyone wanted to form a club. Club members say they love the supportive nature of their group and its welcoming attitude to beginners. Some members have been brewing for decades, others just a few months. Each member is treated equally, and the club's personal style extends to how it handles meetings.

There are no dues or bylaws. Every month, a member steps up to host a meeting, so the onus is on club members to keep the group moving. As one member put it, "We're an anarcho-syndicalist commune.

We take turns to act as a sort of executive officer for the week."

Meetings focus on sensory analysis, where suggestions are offered in a positive, welcoming environment. Several NSHC members have opened professional breweries and still maintain membership in the club. These talented folks continue to support the club with knowledge, experience, and, crucially, beer.

Annual club events include Stein Brew (check out Annie Johnson's "Hot, Hot, Hot!" 2018 Homebrew Con seminar at [HomebrewersAssociation.org/seminars](http://HomebrewersAssociation.org/seminars)) and AHA Big Brew. NSHC also celebrates homebrew legalization every summer with BeerStock 5060, when clubs from all over the state (and even northern Oregon and Vancouver, BC) join in a festival of homebrewing that includes a parade and a fundraiser for the Rotary Club. A homebrew festival features clubs pouring homebrews, ciders, meads, and wine from decorated booths.

Seattle is a diverse, beer-loving community that mirrors club members' diverse brewing styles. NSHC celebrates its 18th anniversary this year and expects to thrive for another 18 and beyond!

### NHC Homebrew Club Award



#### QUAFF Quality Ale and Fermentation Fraternity San Diego, Calif.

The NHC Homebrew Club Award is awarded to the club whose members collectively win the most points in the second round of the National Homebrew Competition (NHC). In 2018, San Diego homebrew club Quality Ale and Fermentation Fraternity (QUAFF) won the prestigious NHC Homebrew Club Award for the third year in a row, with three members bringing home medals in the final round: one gold, one silver, and one bronze.

Lucas Orr won a gold medal in Category 28: Specialty Beer, with his Scottish Crème Brulee, a nitro wee heavy that included lactose, vanilla, and caramelized sugar (see recipe page 91). Brent Krohn took silver in Category 3: Pilsner, and Matt Davis with co-brewer Diana Burk brought

home bronze in Category 9: Scottish & Irish Ale with their Scottish export. All three of QUAFF's 2018 medalists are from San Diego.

QUAFF has a long history of success at NHC, including a streak of six consecutive NHC Homebrew Club awards from 2001 to 2006 and two Ninkasi Award winners to its credit (Jamil Zainasheff in 2004 and 2007 and Paul Sangster in 2011). This legacy of local homebrewing talent naturally fuels the renowned San Diego craft brewing scene.

Since the club's inception, numerous QUAFF members have joined the craft industry as professional brewers, and at least 34 breweries and one meadery were founded or cofounded by QUAFF members.

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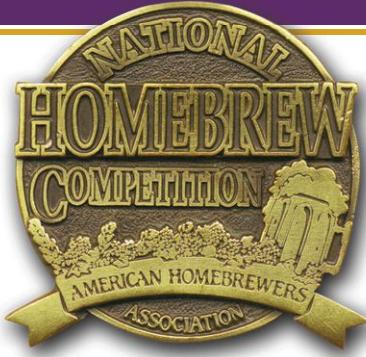
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## 2018 American Homebrewers Association National Homebrew Competition Gold Medal Recipes



**O**n June 30, 2018, National Homebrew Competition (NHC) entrants and Homebrew Con attendees gathered for this year's NHC awards ceremony. More than 3,200 homebrewers and beer enthusiasts gathered at the 40th annual Homebrew Con at the Oregon Convention Center, where they attended seminars, bonded over brews, and had their beers judged in the world's largest beer competition. Homebrewers were awarded gold, silver, and bronze medals in 28 beer, three mead, and two cider categories.

Since 1979, the AHA National Homebrew Competition has recognized the most outstanding homemade beer, mead, and cider produced by homebrewers worldwide. The 2018 National Homebrew Competition had 8,405 entries judged from 3,517 homebrewers in 50 states, Washington, D.C., and 18 countries. Of those first-round entries, 1,203 advanced to the final round, with 1,142 judged. Over its 40-year history, the National Homebrew Competition has evaluated 143,240 brews. The first competition, held in 1979 in Boulder, Colo., judged 34 beers.

This year's winners include Michael Rogers of Wichita, Kan., who earned the Homebrewer of the Year Award; Nathan Williams of Somerville, Mass., who won the Cidermaker of the Year Award; and Michael Wilcox of Wichita, Kan., who received the Meadmaker of the Year Award. QUAFF (Quality Ale and Fermentation Fraternity), based in San Diego, Calif., won the NHC Homebrew Club award; and North Seattle Homebrew Club based in Seattle, Wash., won the Gambrinus Club Award; while Greg Young of Roseville, Calif., won the Samuel Adams Ninkasi Award, for accu-



## 2018 NATIONAL HOMEBREW COMPETITION



NHC Competition Coordinator, John Moorhead.

mulating the most wins in the competition. Twelve sites around the United States completed the first round of judging: Austin, Chicago, Denver, Indianapolis, Kansas City, Minneapolis, New York City, Philadelphia, Portland, Ore., Sacramento, San Diego, and Tampa. Many thanks to the more than 1,000 volunteers working at these sites and others across the country who helped this massive celebration of homebrewing talent come together.

"This has been a milestone year for the American Homebrewers Association. It's inspiring to see such a great turnout at this year's conference, and to see such a strong camaraderie and passion among homebrewers who have traveled far and wide to celebrate their love of homebrewing," said Gary Glass, director, American Homebrewers Association.

In addition to the competition, the conference provided attendees the opportunity to enhance their brewing skills and homebrew knowledge through over 60 seminars focused on beer styles, the brewing process, ingredients, recipe formulation, sensory analysis, and yeast.

"We wouldn't be where we are today without Charlie's vision, devotion and passion to this community," added Glass. "We thank him for the strong foundation he has built for over one million homebrewers in

this country. He leaves a lasting legacy." We asked NHC director John Moorhead to shed some light on a few questions about this year's event.

**Zymurgy:** *How do you manage to find so many dedicated volunteers to make such a massive competition run smoothly?*

**John Moorhead:** Relationships, trust, and communication. Relationships with all the first- and final-round organizers is a major driver to find and hold onto so many dedicated and passionate volunteers. Homebrewers are chomping at the bit to help the AHA and NHC. Tapping into that passion with clear communication on what needs to be accomplished, and empowering those involved, keeps people coming back and helps us make incremental improvements year after year to execute an amazing competition.

**Z:** *What sort of reception did Homebrew Con and the NHC get from one of the prime homebrewing and craft brewing centers of America, Portland, Ore.? Any highlights you can share?*

**JM:** For starters, Homebrew Con 2018 was our second-largest conference ever! So, that alone tells you the kind of reception Portland had for homebrewers. Portland has continued to be a mecca for homebrewers, craft brewers, and beer enthusi-

asts in general, and hosting the 2018 conference and competition really exemplified the city's thriving beer culture.

**Z:** *There must have been a huge pool of talented final-round beer judges to draw from in a beer mecca like Portland—who is responsible for keeping them happy, and what sort of incentives does the NHC offer them for their invaluable participation?*

**JM:** We had an incredible amount of interest for the final-round judging. With the BJCP's judge reception and annual members meeting in conjunction with the conference, the competition has a large, engaged judge pool to draw from. As far as keeping judges happy, judge coordinator Bruce Buerger and I certainly do our best.

The final round this year had roughly 200 judges. Coordinating judge assignments is a herculean task. Judges availability is continuously changing up to competition day, but all the while Bruce does an excellent job juggling the competition's needs. It's a full day with three sessions, so we feed everyone breakfast and lunch and focus on executing a well-run competition. Fortunately, many judges look forward to this competition each year and don't need much convincing to participate.

**Z:** *Were there any changes to the lineup of first-round sites this year, and were there any logistical challenges, or does that aspect of competition organization tend to run itself?*

**JM:** Each year presents its own set of challenges, but with so many dedicated people working on the competition, things tend to work themselves out. Those involved in the competition have an uncanny talent for finding creative solutions to challenges.

One logistical change was compressing the judging window from six weeks to three weeks after the shipping window. We made this change to benefit entrants and their entries—less wait time between shipping and judging means fresher entries.



Another challenge the competition has every year is judge recruitment. Each first-round site has anywhere from 700 to 750 entries, which take a lot of palates to complete. First-round organizers do a fantastic job engaging and recruiting judges, but if you're looking to help with the competition, come judge the first round!

**Z:** What were some of the most memorable aspects of this year's competition?

**JM:** There are so many memorable moments each year, but one that always sticks out to me is the awards ceremony after the final round has concluded. It's the climax of the entire competition. Entrants are eagerly holding their breath while medal winners are announced, hoping they hear their name and see it displayed on the big screen for everyone to see. Those are some of the most memorable, exciting experiences every year!

**Z:** Next year's final round, along with Homebrew Con and the awards ceremony, will take place in Providence, R.I., a city with a fiercely proud and passionate home- and craft brewing community. Are there any major changes coming for 2019?

**JM:** You're right about Providence's vibrant, well-rooted beer communities, and I imagine those communities have been eager for the conference to come back to New England. The last conference in the region took place in 1991 in Manchester, N.H.

The goal of any change is to improve the competition for entrants and volunteers. The competition will likely see some changes to the first and final rounds, but those details are being discussed with the AHA Competition Subcommittee, so I'm hush-hush for now. But stay tuned for announcements in the fall!

Thanks, John, for all your hard work managing this amazing event! And now let's check out the gold medal recipes from all 33 of this year's categories.

**Amahl Turczyn** is associate editor of *Zymurgy*.

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## 2018 NATIONAL HOMEBREW COMPETITION

### Category 1

#### PALE AMERICAN LAGER

315 entries

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**Greg Young**  
**Roseville, Calif.**

AHA 2018 Samuel Adams Ninkasi Winner

"John's Lager"  
1B American Lager

<b>Batch Volume:</b>	5 US gallons (18.9 L)
<b>Original Gravity:</b>	1.044 (11° P)
<b>Final Gravity:</b>	1.008 (2° P)
<b>Bitterness:</b>	13 IBU
<b>Color:</b>	2–3 SRM
<b>Alcohol:</b>	4.7% by volume
<b>Efficiency:</b>	82%

### Category 2

#### PALE EUROPEAN BEER

369 entries

##### Sponsored by:

Cargill Craft Malt



**Greg Young**  
**Roseville, Calif.**

AHA 2018 Samuel Adams Ninkasi Winner

"Hayden's Lager"  
2A International Pale Lager

#### MALTS

- 6 lb.** (2.72 kg) Rahr pale two-row malt
- 1.71 lb.** (776 g) Briess flaked corn
- 13.7 oz.** (388 g) Briess flaked rice

#### HOPS

- 0.5 oz.** (14 g) Hallertau Tradition, 6.6% a.a. @ 60 min
- 0.5 oz.** (14 g) Hallertau Tradition, 6.6% a.a. @ 5 min

#### WATER

Use 1 g each of calcium chloride and gypsum at mash, Use 1.7 g each of calcium chloride and gypsum in the boil. Target Ca 50 ppm, Cl 80 ppm, SO<sub>4</sub> 64 ppm.

#### YEAST

White Labs WLP840 American lager yeast, 2.8 L starter

#### BREWING NOTES

Mash at 149° F (65° C) for 90 minutes with constant recirculation during mash. Adjust pH with lactic acid to 5.2. Raise temp to 168° F (76° C) for mash out, hold for 10 minutes, then begin runoff and sparge. Boil for 60 minutes. Knockout at 45° F (7° C), oxygenate

and pitch, let free rise to 50° F (10° C), and hold at that temperature for fermentation. Once 8 points from final gravity, let free rise to 60° F (16° C) for a diacetyl rest and hold for 7 days. Slowly cool, no more than 5° F (2.8° C) per day, to 32° F (0° C), hold for 2 days once temp is reached, then keg. Lager in keg for 3 weeks then fine with gelatin. Force carbonate to 3 vol. (6 g/L).

#### EXTRACT VERSION

Substitute 4.5 lb. (2.04 kg) Pilsner malt extract syrup for pale two-row malt. Substitute 1 lb. (454 g) dextrose for flaked corn. Substitute 9 oz. (255 g) rice extract syrup for flaked rice. Dissolve sugar and extracts completely in reverse osmosis water, then top off to desired boil volume. Proceed as above.

#### RUNNERS-UP

**Silver Medal:** Gregory Strawser, Rochester, N.Y., with Ryan Metzger, American Light Lager

**Bronze Medal:** Kevin Nanzer of Sacramento, Calif., Brewing Network

#### WATER

Use 1.5 g calcium chloride at mash and 2.4 g calcium chloride at boil. Strive for Ca 40 ppm and Cl 98 ppm.

#### YEAST

4 packs White Labs WLP940 Mexican lager, 3 L starter

#### BREWING NOTES

Mash at 148° F (64° C) for 90 minutes, with constant recirculation of mash to maintain even temp. Adjust pH with lactic acid to 5.2. At the end of mash, heat to 168° F (76° C) for mash out, hold for 10 min, then begin runoff and sparge. Sparge at 168° F (76° C). Boil 90 minutes. Knockout at 48° F (9° C), oxygenate and pitch, let free rise to 51° F (11° C) and hold. Once 8 points from final gravity, let free rise to 60° F (16° C) for a diacetyl rest and hold for 7 days. Slowly

*Continued >>*



cool, no more than 5° F per day, to 34° F (1° C), and hold for 2 days once temp is reached, then keg. Lager in keg for 2 weeks then fine with gelatin. Force carbonate to 3 vol. (6 g/L).

#### EXTRACT VERSION

Substitute 5.5 lb. (2.49 kg) Pilsner malt extract syrup for Pelton malt. Substitute 1.25 lb. (0.57 kg) dextrose for flaked corn. Dissolve extract completely in reverse osmosis water, then top off to desired boil volume. Proceed as above.

#### Category 3

##### PILSNER

253 entries

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**Kyle White**

**Long Beach, Calif.**

Long Beach Homebrewers

"Bavarian Pils"

5D German Pils

**Batch Volume:** 6.9 US gallons (26.1 L)

**Original Gravity:** 1.050 (12.5° P)

**Final Gravity:** 1.009 (2.3° P)

**Bitterness:** 23–25 IBU

**Color:** 3 SRM

**Alcohol:** 5.4% by volume

**Efficiency:** 79%

##### MALTS

**10 lb.** (4.54 kg) Weyermann Barke  
Pils malt

**0.75 lb.** (340 g) Weyermann Vienna malt

**0.75 lb.** (340 g) Briess Carapils malt

##### HOPS

**0.28 oz.** (8 g) German Magnum,  
14.5% a.a. @ 90 min

**0.53 oz.** (15 g) US Hallertau, 4.9% a.a.  
@ 30 min

**0.53 oz.** (15 g) US Hallertau, 4.9% a.a.  
@ 15 min

##### WATER

Reverse osmosis water,  $\text{CaCl}_2$  0.45 g/gal.,  $\text{MgSO}_4$  0.12 g/gal., 88% lactic acid 0.2 mL/gal.

##### YEAST

White Labs WLP833 German Bock Lager, 2.0–2.5B cells/L°P.

##### ADDITIONAL INGREDIENTS

<b>1 capsule</b>	Servomyces @ 10 min
<b>1 tab</b>	Whirlfloc @ 10 min

##### BREWING NOTES

No-sparge method with 10 gal. of reverse osmosis water (3.48 qt./lb.). Mash in with initial temperature of 151° F (66° C). Rest for 4 hours, during which time the mash temperature may drop as low as 142° F (61° C). Raise temperature to 156° F (69° C) by applying direct heat and recirculating. Run off to kettle and boil for 90 minutes. Chill to 46° F (8° C) and pitch yeast with 90 seconds of pure O<sub>2</sub>. Monitor temperature using thermowell in carboy. Ferment at 48° F (9° C) until gravity reaches 1.020 (approximately 5 days). Let rise to 52° F (11° F) until gravity reaches 1.012 SG (approximately 2 days). Let rise to 62° F (17° C) until completion (approximately 3 days). Closed transfer to fully CO<sub>2</sub> purged and sanitized keg. Chill to 32° F (0° C) and lager for 2 weeks. Force carbonate to 2.5 volumes (5 g/L) of CO<sub>2</sub>. The very long mash time is a function of convenience, but creates a very fermentable wort. Use gelatin fining if required to clear after lagering. (1 tsp. in 200 mL distilled water, heated to 150° F (66° C)). Lager and add fining at 32° F (0° C). Serve at 38–40° F (3–4° C).

##### EXTRACT VERSION

Substitute 9.5 lb. (4.31 kg) Pilsner malt

#### RUNNERS-UP

**Silver Medal:** Justin McClenahan, Silver Spring, Md.

**Bronze Medal:** Ryan Kopp, Cranston, R.I., Rhode Island Brewing Society

extract syrup for Pilsner, Vienna, and dextrin malts. Dissolve extracts completely in reverse osmosis water. Proceed as above. Color may be darker (4 SRM) and finishing gravity higher (1.012) when using extract.

#### RUNNERS-UP

**Silver Medal:** Brent Krohn, San Diego, Calif., Quality Ale and Fermentation Fraternity (QUAFF)

**Bronze Medal:** Robert Lovelace, Denver, N.C., Fermentation Nation



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## 2018 NATIONAL HOMEBREW COMPETITION

### Category 4

#### AMBER EUROPEAN BEER

273 entries

**Sponsored by:**  
Gambrinus Malting



**Robert Lovelace**  
**Denver, N.C.**

Fermentation Nation

"Vienna Lager"  
7A Vienna Lager

<b>Batch Volume:</b>	6.5 US gallons (24.6 L)
<b>Original Gravity:</b>	1.052 (12.8° P)
<b>Final Gravity:</b>	1.013 (3.8° P)
<b>Bitterness:</b>	31 IBU
<b>Color:</b>	28 SRM
<b>Alcohol:</b>	5.2% by volume
<b>Efficiency:</b>	64%

### Category 5

#### DARK EUROPEAN LAGER

189 entries

**Sponsored by:**  
Briess Malt & Ingredients Co.



**Shawn Miller**  
**Cheyenne, Wyo.**

High Plains Drafters

"Dark Rhine"  
8B Schwarzbier

#### MALTS

- 6.5 lb.** (2.95 kg) Weyermann Pilsner malt
- 5 lb.** (2.27 kg) Weyermann Vienna malt
- 1.5 lb.** (0.68 kg) Weyermann Munich II malt
- 8 oz.** (227 g) Briess Victory malt
- 8 oz.** (227 g) Weyermann Cara-Amber malt
- 0.15 lb.** (68 g) Briess Black Prinz malt

#### HOPS

- 0.63 oz.** (18 g) Magnum, 14% a.a.  
@ 60 min
- 1 oz.** (28 g) Tettnang, 3.5% a.a.  
@ 0 min

#### WATER

Low-mineral tap water

#### YEAST

2 packs White Labs WLP830 German lager,  
3 L starter

#### ADDITIONAL INGREDIENTS

- 1 tab** Whirlfloc @ 0 min

#### BREWING NOTES

Adjust pH to 5.2 with lactic acid for mash.  
RIMS step mash 144° F (62° C) for 30 min,

158° F (70° C) for 30 min, 170° F (77° C) for 15 min or until clear. No sparge, top off with water, 60 min boil, add lactic acid for 5.2 pH if needed. Knockout at 48° F (9° C), ferment at 48° F for 10 days, then raise to 58° F (14° C) over 4 days. Lager and force carbonate at 36° F (2° C) for 14 days until clear.

#### EXTRACT VERSION

Substitute 4.5 lb. (2.04 kg) Pilsner malt extract syrup for the Pilsner malt. Substitute 3.5 lb. (1.59 kg) Vienna malt extract syrup for the Vienna malt. Substitute 14 oz. (397 g) Munich malt extract syrup for the Munich malt. Steep Cara-Amber, Victory, and Black Prinz malts at 160° F (71° C) in reverse osmosis water for 30 minutes. Rinse grains, dissolve extract completely in the resulting wort, then top off to desired boil volume with reverse osmosis water. Proceed as above.

#### RUNNERS-UP

**Silver Medal:** Chris Bozzo, Livermore, Calif., with Ryan Reed, Marzen

**Bronze Medal:** Matthew Border, South Boston, Mass., Boston Wort Processors, Vienna

water and hold 60 minutes at 148° F (64° C). Sparge at 168° F (76° C) with 8.23 gal. (31.2 L) water. Boil 120 minutes, adding first hop addition at 60 minutes and last hop addition at 10 minutes. Ferment at 55° F (13° C) for two weeks. Lager for eight weeks at 35° F (2° C).

#### EXTRACT VERSION

Substitute 7 lb. (3.18 kg) Munich malt extract syrup for Munich malt. Steep Carafa malt in a grain bag at 160° F (71° C) in reverse osmosis water for 30 minutes. Drain, remove grains, dissolve extract completely in reverse osmosis water, then top off to desired boil volume. Proceed as above.

#### RUNNERS-UP

**Silver Medal:** Paul Brown, Pinole, Calif., Diablo Order of Zymiracle Enthusiasts, International Dark Lager

**Bronze Medal:** Jonathan Lizenby, Harvest, Ala., 256 Brewers, Schwarzbier



## Category 6

### STRONG EUROPEAN LAGER

247 entries

**Sponsored by:**  
Rahr Malting



**Christopher Norris**  
**San Jose, Calif.**

Bay Area Mashers

"Aurora"  
4C Helles Bock

**Batch Volume:** 6.5 US gallons (24.6 L)  
**Original Gravity:** 1.066 (16.3° P)  
**Final Gravity:** 1.014 (3.5° P)  
**Bitterness:** 24 IBU  
**Color:** 7 SRM  
**Alcohol:** 7% by volume  
**Efficiency:** 70%

#### MALTS

**10 lb.** (4.54 kg) Weyermann Pilsner malt  
**5 lb.** (2.27 kg) Weyermann Munich Type I  
**2 lb.** (0.9 kg) Weyermann Vienna  
**4 oz.** (113 g) Weyermann Acid Malt

#### HOPS

**0.5 oz.** (14 g) Hallertau Magnum, 12.4% a.a. @ FWH  
**0.6 oz.** (17 g) Hallertau Mittelfrueh, 4.0% a.a. @15 min

#### WATER

**39 qt.** distilled water  
**5 g** calcium chloride (About 0.5 g/gal.)

#### YEAST

White Labs WLP833 German Bock Lager. Two pitch packs in a 1.5 L starter, on stir plate for 24 hours.

#### ADDITIONAL INGREDIENTS

**1 mL** FermCap-S added before boil  
**2 g** Wyeast nutrient  
**1 tab** Whirlfloc @ 15 mins before flameout

#### BREWING NOTES

Mash at 150° F (66° C) for 30 minutes. Transfer wort onto FWH (collect 8 gal.). Add FermCap-S to wort in boil kettle before boil starts. Add hops, yeast nutrient and

Whirlfloc 15 min. before flameout. Boil for 60 min. total, leaving 6.5 gal. Chill to 80° F (27° C) using immersion chiller. Bubble pure O<sub>2</sub> for 1 min. Cold crash to 45° F (7° C). Pitch yeast and allow temperature to rise to 50° F (10° C). Continue fermentation at 50° F (takes 2–3 weeks). When beer reaches FG, cold crash to 35° F (2° C). Dissolve 7 g gelatin in 250 mL hot water. Add gelatin mixture and rock gently to mix. Lager at 35° F for 30 days. Transfer to 5 gal. corny keg and force carbonate to 2.3 vol. (4.6 g/L).

#### EXTRACT VERSION

Substitute 8 lb. (3.63 kg) Pilsner malt extract syrup for the Pilsner malt, 3 lb. (1.36 kg) Munich malt extract syrup for the Munich malt, and 1 lb. (454 g) Vienna malt extract syrup for the Vienna malt. Omit acid malt. Dissolve extract completely in reverse osmosis water, then top off to desired boil volume with reverse osmosis water. Proceed as above.

#### RUNNERS-UP

**Silver Medal:** Tim Lawson, Cincinnati, Ohio, Doppelbock

**Bronze Medal:** Robert Friedman, Palm Beach Gardens, Fla., Palm Beach Draughtsmen, Helles Bock

## Category 7

### GERMAN WHEAT BEER

200 entries

**Sponsored by:**  
Thumbprint



**Alexander Lemp**  
**East Islip, N.Y.**

Association of Long Island Homebrew Clubs

#### "Roger That"

27H Roggenbier (Historical Beer)

**Batch Volume:** 5 US gallons (18.9 L)  
**Original Gravity:** 1.060 (14.8° P)  
**Final Gravity:** 1.014 (3.5° P)  
**Bitterness:** 17 IBU  
**Color:** 15 SRM  
**Alcohol:** 6% by volume  
**Efficiency:** 70%

#### MALTS

**6.25 lb.** (2.83 kg) rye malt  
**3.5 lb.** (1.59 kg) Munich malt  
**3 lb.** (1.36 kg) Pilsner malt  
**1 lb.** (454 g) Weyermann Caramunich II malt  
**2 oz.** (57 g) Weyermann Carafla Special II malt

#### HOPS

**1 oz.** (28 g) Tettnang, 4% a.a. @ 60 min  
**0.3 oz.** (9 g) Czech Saaz, 3.5% a.a. @ 15 min

#### YEAST

White Labs WLP300 Hefeweizen Ale or Wyeast 3068 Weihenstephan Weizen

#### BREWING NOTES

Use filtered tap water. Mash at 154° F (68° C) with about 5.5 gal. (20.8 L) of water for 60 mins. With a BIAB system, after draining the main wort, mash out with 2 to 2.5 gal. of water at 170° F (77° C) for 10 to 15 minutes. Collect 7.5 gal. for the 90-minute boil. Ferment at 62° F (17° C).

*Continued >>*



## 2018 NATIONAL HOMEBREW COMPETITION

### EXTRACT VERSION

Substitute 5.5 lb. (2.5 kg) rye malt extract syrup and 2.5 lb. (1.13 kg) Munich malt extract syrup for rye, Munich, Pilsner, and Caramunich malts. Steep Carafa Special malt at 160° F (71° C) in reverse osmosis water for 30 minutes. Drain, remove grains, dissolve extract completely, top off to desired boil volume, and proceed as above.

### RUNNERS-UP

**Silver Medal:** Dennis Pike, Chapel Hill, N.C., Nash Street Homebrew Club, Weissbier

**Bronze Medal:** Tyler Cipriani, Longmont, Colo., with Blazey Heier, Wichita Homebrewers Organization (WHO), Weissbier



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### Category 8

#### PALE BRITISH ALE

234 entries

##### Sponsored by:

Alternative Beverage



**Louis Strowger**  
**Bremerton, Wash.**

West Sound Brewers

"Lou's Best ESB"  
11B Best Bitter

**Batch Volume:** 5.5 US gallons (20.8 L)

**Original Gravity:** 1.050 (12.4° P)

**Final Gravity:** 1.012 (3.1° P)

**Bitterness:** 41 IBU

**Color:** 12 SRM

**Alcohol:** 5% by volume

**Efficiency:** 70%

### MALTS

**10 lb.** (4.54 kg) Hugh Baird Maris Otter pale malt

**1 lb.** (454 g) Hugh Baird 55° L crystal malt

**12 oz.** (340 g) Crisp amber malt

**8 oz.** (227 g) Hugh Baird 60° L brown malt

### HOPS

**1.35 oz.** (38 g) Northern Brewer, 6.8% a.a.  
@ 60 min

**1 oz.** (28 g) East Kent Goldings,  
6.1% a.a. @ 15 min

**0.5 oz.** (14 g) East Kent Goldings,  
6.1% a.a. @ 5 min

### YEAST

Wyeast 1968 London ESB yeast

### WATER

Carbon-filtered tap water

### BREWING NOTES

Mash at 150° F (66° C) for 60 minutes or until conversion is complete. Vorlauf for 10 minutes or until wort is clear, collect wort. Batch sparge with volume of water to achieve 7.5 gal of preboil volume (Vorlauf and transfer clear wort). Boil for 60 minutes following hop schedule. Cool wort to 66° F (19° C), pitch London ESB yeast, and ferment at the same temperature for 10 to 14 days. Transfer to secondary and rest at 66° F (19° C) for 14 days. Cold crash to 34° F (1° C) for 2 days, transfer to keg, and force carbonate at 30 psi for 2 days.

### EXTRACT VERSION

Substitute 6.5 lb. (2.95 kg) pale malt extract syrup for pale malt. Steep remaining grains in a grain bag at 160° F (71° C) in reverse osmosis water for 30 minutes. Drain, remove grains, dissolve extract completely in reverse osmosis water, then top off to desired boil volume. Proceed as above.

### RUNNERS-UP

**Silver Medal:** Keith Klingler, Pittsburgh, Calif., with Vito Delucchi, Diablo Order of Zymiracle Enthusiasts (DOZE), Australian Sparkling Ale

**Bronze Medal:** Christopher Leon, Cypress, Texas with Sam Almerico, Strong Bitter

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## Category 9

### SCOTTISH & IRISH ALE

210 entries

#### Sponsored by:

St. Louis Wine & Beer Making



**Todd Stewart**  
**Chicago, Ill.**

C.H.A.O.S. Brew Club

"Stewpid Propino"  
14A Scottish Light

**Batch Volume:** 6.08 US gallons (23 L)

**Original Gravity:** 1.034 (8.5° P)

**Final Gravity:** 1.010 (2.5° P)

**Bitterness:** 17 IBU

**Color:** 18 SRM

**Alcohol:** 3.3% by volume

**Efficiency:** 75%

#### MALTS

- 6.4 lb.** (2.9 kg) Muntons Propino pale malt
- 4.8 oz.** (136 g) 400° L roasted barley
- 3 oz.** (85 g) 400° L chocolate malt
- 2.5 oz.** (71 g) 105° L Simpsons double roasted crystal malt

#### HOPS

- 1 oz.** (28 g) Fuggles, 4.4% a.a.  
@ 60 min

#### WATER

CaCl<sub>2</sub> 1 g/gal. in mash water and sparge water, adjust mash and sparge water pH to 5.3 with lactic acid

#### ADDITIONAL INGREDIENTS

- 1 Whirlfloc tablet @ 10 min
- Yeast nutrient @ 10 min

#### YEAST

Wyeast #1728 Scottish ale yeast, 2 L starter

#### BREWING NOTES

Mash at 152° F (67° C) for 60 min with 12.8 qt. strike water. Batch sparge with 7.42 gal. (28 L) of water at 168° F (76° C). Collect first gallon of runnings in a separate boiling pot. While collecting the remaining wort in the brew kettle, bring the 1 gal. of first runnings to a boil. Boil this gallon of wort until it is

reduced by half, taking care not to burn the wort. This will allow for a nice caramelization. Add this 1/2 gal. of wort to the main brew kettle and boil for 60 min. After 60 min. boil, cool wort to 55° F (13° C) or as low as your chiller will go. Pitch yeast starter into cooled wort and ferment at 55° F (13° C) for 3 weeks. Once gravity has reached 1.010 (2.5° P), transfer beer to secondary or keg. Lager beer in secondary or keg at 33° F (1° C) for 30 days before serving. Style calls for low to medium level of carbonation.

#### EXTRACT VERSION

Substitute 5.25 lb. (2.38 kg) pale malt extract syrup for Propino pale malt. Steep chocolate and crystal malts with roast barley in a grain bag at 160° F (71° C) in reverse osmosis water for 30 minutes. Drain, remove grains, dissolve extract completely in reverse osmosis water, then top off to desired boil volume. Proceed as above.

#### RUNNERS-UP

**Silver Medal:** Robert Smith, Newton, N.J., Sussex County's United Brewers & Alchemists (SCUBA), Irish Red Ale

**Bronze Medal:** Matt Davis, San Diego, Calif., with Diana Burk, QUAFF (Quality Ale and Fermentation Fraternity), Scottish Export

## Category 10

### AMERICAN PALE ALE

309 entries

#### Sponsored by:

BJ's Restaurant & Brewhouse



**Jon Weaver**  
**Chicago, Ill.**

"Alabama Hopslammer"  
18B American Pale Ale

**Batch Volume:** 6 US gallons (22.7 L)

**Original Gravity:** 1.056 (13.8° P)

**Final Gravity:** 1.014 (3.5° P)

**Bitterness:** 45 IBU

**Color:** 6 SRM

**Alcohol:** 5.6% by volume

**Efficiency:** 72%

#### MALTS

- 8 lb.** (3.63 kg) Rahr pale two-row malt
- 3 lb.** (1.36 kg) Weyermann pale ale malt
- 1 lb.** (454 g) Weyermann Barke Munich malt
- 8 oz.** (227 g) Weyermann CaraMunich II malt
- 4 oz.** (113 g) Weyermann acidulated malt

#### HOPS

- 0.5 oz.** (14 g) Crystal @ 45 min
- 0.5 oz.** (14 g) Mosaic @ 20 min
- 0.5 oz.** (14 g) Glacier @ 20 min
- 0.5 oz.** (14 g) Centennial @ 15 min
- 0.5 oz.** (14 g) Mosaic @ 5 min
- 0.5 oz.** (14 g) Glacier @ 5 min
- 0.5 oz.** (14 g) Centennial @ 0 min
- 0.5 oz.** (14 g) Amarillo @ 0 min
- 0.5 oz.** (14 g) Crystal @ 0 min
- 2 oz.** (57 g) Amarillo (hopback)
- 2 oz.** (57 g) Simcoe (dry hop 3 days)
- 1 oz.** (28 g) Citra Cryo (dry hop 3 days)
- 0.5 oz.** (14 g) Mosaic Cryo (dry hop 3 days)

#### WATER

100 ppm Ca, 70 ppm Cl, 150 ppm SO<sub>4</sub>

*Continued >>*



## 2018 NATIONAL HOMEBREW COMPETITION

### YEAST

Blend of Wyeast 1056 and Safale US-05

### BREWING NOTES

Mash at 154° F (68° C) for 45 minutes, 162° F (72° C) for 20 minutes, and 172° F (78° C) for 10 minutes. Ferment in primary for 3 days at 66° F (19° C). If possible, dry hop using a stainless steel dry hopping canister (it helps to add a layer of leaf hops on top of the pellets to contain the small particles). With about 1° P remaining, perform a closed transfer

to a keg and attach a spunding valve, then allow to carbonate/finish. Otherwise ferment in primary to terminal gravity and rack/package as usual.

### EXTRACT VERSION

Substitute 8.25 lb. (3.74 kg) pale malt extract syrup for pale and pale ale malts, and 18 oz. (510 g) Munich malt extract syrup for Munich malt and CaraMunich malts. Omit acidulated malt. Dissolve extracts completely in reverse osmosis water, then top off to desired boil volume. Proceed as above.

### RUNNERS-UP

**Silver Medal:** Lee Holyoak, Bluffton, S.C., with Ross Hendricks, American Pale Ale

**Bronze Medal:** Aaron Vieira, Costa Mesa, Calif., with Scott Windsor, American Pale Ale

## Category 11

### AMBER & BROWN AMERICAN BEER

266 entries

#### Sponsored by:

High Gravity Homebrewing  
& Winemaking Supplies



**Jeremy Adams**  
**Jefferson, Mass.**

Mid-Mass Malt Masters (M4)

"Wood St. Common"  
19B California Common

<b>Batch Volume:</b>	5 US gallons (18.9 L)
<b>Original Gravity:</b>	1.049 (12.3° P)
<b>Final Gravity:</b>	1.013 (3.3° P)
<b>Bitterness:</b>	37 IBU
<b>Color:</b>	11 SRM
<b>Alcohol:</b>	4.7% by volume
<b>Efficiency:</b>	72%

### MALTS

<b>8 lb.</b>	(3.63 kg) Pilsner malt
<b>1 lb.</b>	(454 g) 40° L crystal malt
<b>8 oz.</b>	(227 g) dextrin malt
<b>4 oz.</b>	(113 g) Munich malt
<b>4 oz.</b>	(113 g) Victory malt
<b>1.5 oz.</b>	(43 g) chocolate malt

### HOPS

<b>0.5 oz.</b>	(14 g) Northern Brewer, 10.2% a.a. @ 60 min
<b>0.85 oz.</b>	(24 g) Northern Brewer, 10.2% a.a. @ 20 min
<b>1.25 oz.</b>	(35 g) Northern Brewer, 10.2% a.a. @ 0 min

### WATER

Mash water: 66 ppm Ca, 6 ppm Mg, 5 ppm Na, 56 ppm SO<sub>4</sub>, 95 ppm Cl, 15 ppm HCO<sub>3</sub>. Add 0.5mL lactic acid to sparge water.

### ADDITIONAL INGREDIENTS

<b>1</b>	tablet Whirlfloc @ 15 minutes
<b>1.5 Tbsp.</b>	yeast nutrient @ 15 minutes

### YEAST

White Labs WLP810 San Francisco lager yeast, 1.5 L starter

### BREWING NOTES

Mash at 152° F (67° C) for 60 minutes. Mash out at 168° F (76° C). Sparge at 168 F (76° C). Ferment at 62° F (17° C) for 14 days. Force carbonate to 2.6 vol. (5.2 g/L).

### EXTRACT VERSION

Substitute 6 lb. (2.72 kg) Pilsner malt extract syrup for Pilsner malt. Steep remaining grains at 150° F (66° C) for 30 minutes. Drain, remove grains, dissolve extract completely in reverse osmosis water, then top off to desired boil volume. Proceed as above.

### RUNNERS-UP

**Silver Medal:** Mark Ranes of Turlock, Calif., Central Valley Brewers Guild, American Brown Ale

**Bronze Medal:** George Turner of Warren, Mich., Kuhnhenn Guild of Brewers (KGB), Kentucky Common



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## Category 12

## BROWN BRITISH BEER

314 entries

## Sponsored by:

Alternative Beverage



**Nic Pestel**  
Missoula, Mont.  
Zoo City Zymurgists

"Hey Man"  
13A Dark Mild

**Batch Volume:** 10 US gallons (37.9 L)

**Original Gravity:** 1.050 (12.5° P)

**Final Gravity:** 1.014 (3.5° P)

**Bitterness:** 26 IBU

**Color:** 29 SRM

**Alcohol:** 4.7% by volume

**Efficiency:** 80%

## MALTS

**14 lb.** (6.35 kg) Montana two-row pale malt

**3 lb.** (1.36 kg) 10° L Munich malt

**1 lb.** (454 g) Carafa II malt

**1 lb.** (454 g) chocolate malt

**1 lb.** (454 g) dextrin malt

## HOPS

**2 oz.** (57 g) Tettnang, 4.5% a.a.  
@ 60 min

**2 oz.** (57 g) Hallertau, 4.8% a.a. @ 15 min  
**1 oz.** (28 g) Hallertau, 4.8% a.a. @ 2 min

## YEAST

3 packs Wyeast 2112 California Lager yeast,  
starter

## BREWING NOTES

Mash at 152° F (67° C) for 60 minutes. Boil 60 minutes. Ferment at 55° F (13° C) and allow to free rise to 58° F (14° C). Hold for 7 days, then allow to rise to 60° F (16° C) for 3 days to finish.

## EXTRACT VERSION

Substitute 10 lb. (4.54 kg) pale malt extract syrup for pale malt. Substitute 2.5 lb. (1.13 kg) Munich malt extract for Munich malt. Reduce dextrin malt to 8 oz. (227 g). Steep dextrin and remaining malts at 160° F (71° C) for 30 minutes. Drain, remove grains, dissolve extract completely in reverse osmosis water, then top off to desired boil volume. Proceed as above.

## RUNNERS-UP

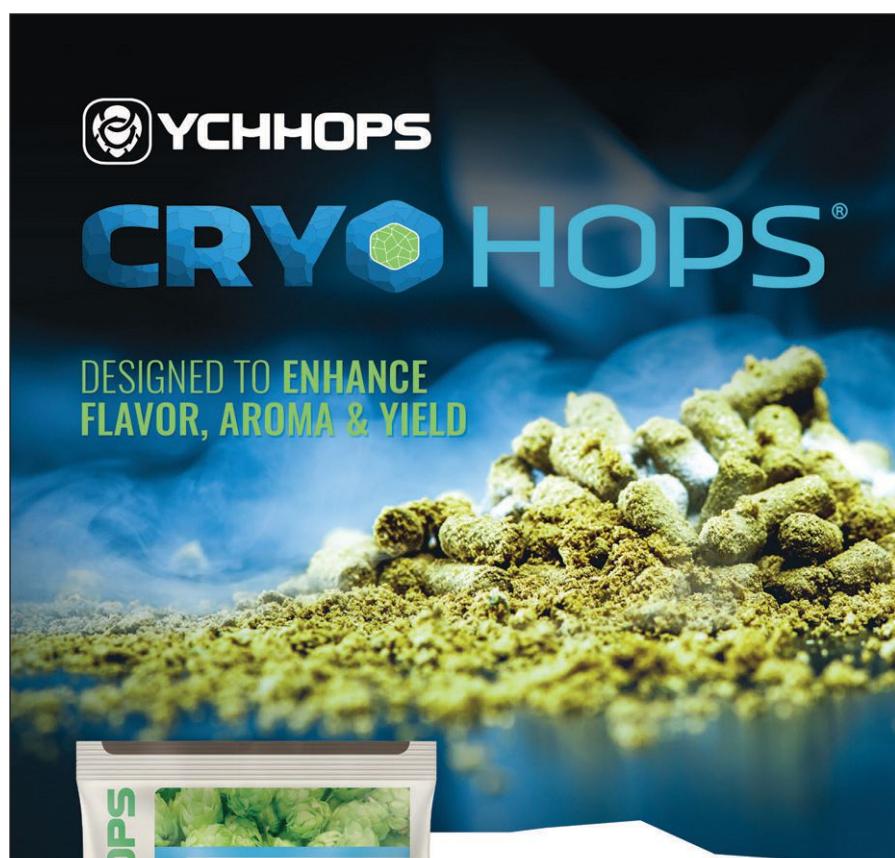
**Silver Medal:** Jeff Poirot of Wichita Falls, Texas, with Nicholas McCoy, Draft Punk, Dark Mild

**Bronze Medal:** Todd Slater of Thousand Oaks, Calif., with Matt Castellino, Thousand Oaked Homebrewers, English Porter

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## 2018 NATIONAL HOMEBREW COMPETITION

### Category 13

#### BRITISH & IRISH STOUT

370 entries

##### Sponsored by:

Brew & Grow



**James Slattery  
with Jonathan White  
Vista, Calif.**

"Beerwreckdus"  
16B Oatmeal Stout

**Batch Volume:** 12.5 US gallons (47.3 L)  
**Original Gravity:** 1.076 (18.5° P)  
**Final Gravity:** 1.021 (5.3° P)

### Category 14

#### AMERICAN PORTER & STOUT

288 entries

##### Sponsored by:

Deschutes Brewery



**George Schwab IV  
with Aaron McFarland  
Conway, Ark.**

"Porter"  
27G Pre-Prohibition Porter  
(Historical Beer)

**Batch Volume:** 10.5 US gallons (39.7 L)  
**Original Gravity:** 1.056 (13.8° P)  
**Efficiency:** 72%

**Bitterness:** 30.5 IBU  
**Color:** 49 SRM  
**Alcohol:** 7.2% by volume  
**Efficiency:** 72%

#### MALTS

**12 lb.** (5.44 kg) Malteurop pale two-row malt  
**12 lb.** (5.44 kg) Crisp Maris Otter pale malt  
**4 lb.** (1.81 kg) 412° L Simpsons chocolate malt  
**2.5 lb.** (1.13 kg) flaked oats  
**2.5 lb.** (1.13 kg) flaked barley  
**2.25 lb.** (1.02 kg) 105° L Simpsons DRC malt  
**1.5 lb.** (0.68 kg) Gambrinus honey malt

#### HOPS

**2.5 oz.** (71 g) East Kent Goldings, 5% a.a.  
@ 60 min  
**1.25 oz.** (35 g) Northern Brewer, 8% a.a.  
@ 60 min  
**2.5 oz.** (71 g) East Kent Goldings, 5% a.a.  
@ 10 min

#### YEAST

**3 vials** White Labs WLP028 Edinburgh Ale

#### BREWING NOTES

Mash at 155° F (68° C), Vorlauf 10 minutes, collect wort, and boil 75 minutes. Ferment at 67° F (19° C) for 7 days. Cold crash to 35° F (2° C) and secondary at that temperature for 7 days. Filter to 1 micron. Force carbonate to 2 vol. (4 g/L).

#### PARTIAL-MASH VERSION

Reduce Maris Otter pale malt to 4 lb. (1.81 kg). Substitute 14.75 lb. (6.69 kg) pale malt extract syrup for pale malt and remaining Maris Otter malt. Mash chocolate malt, oats, flaked barley, DRC malt, and honey malt with the 4 lb. Maris Otter pale at 155° F (68° C) for 45 minutes in 20.9 qt. (18.8 L) water. Drain, remove grains, dissolve extract completely, and top off to desired boil volume. Proceed as above.

#### RUNNERS-UP

**Silver Medal:** Charles Macaluso of Saint Helens, Ore., Oregon Brew Crew, Tropical Stout

**Bronze Medal:** Mike Riddle of Napa, Calif., HOME Brewers, Foreign Extra Stout

#### BREWING NOTES

Mash at 152° F (67° C) for 60 minutes using full-wort brew-in-a-bag with no sparge. Boil 60 minutes. Ferment at 54° F (12° C) until activity slows, and then warm to 64° F (18° C) for a diacetyl rest. Rack to a keg and lager for 2 weeks before serving.

#### EXTRACT VERSION

Substitute 12.5 lb. (5.67 kg) pale malt extract syrup and 1 lb. (454 g) rye malt extract syrup for the pale malt, rye malt, and acidulated malt. Steep the remaining grains for 30 minutes at 155° F (68° C) in 4.7 qt. (4.4 L) water. Rinse grains, dissolve extract completely in resulting wort, and top off to desired boil volume with reverse osmosis water. Proceed as above.

#### RUNNERS-UP

**Silver Medal:** Benjamin Amidon, Arlington, Mass., American Stout

**Bronze Medal:** Dan George, Westerville, Ohio, Scioto Olentangy Darby Zymurgists (SODZ), American Stout



## Category 15

**IMPERIAL STOUT**

221 entries

**Sponsored by:**

BeerSmith



**Sean Kinnas**  
**Irwin, Pa.**

Three Rivers Alliance  
of Serious Homebrewers

"Han Solo Shot First"  
20 C Imperial Stout

**Batch Volume:** 7.5 US gallons (28.4 L)  
**Original Gravity:** 1.094 (22.5° P)  
**Final Gravity:** 1.030 (7.5° P)  
**Bitterness:** 64 IBU  
**Color:** 57.4 SRM  
**Alcohol:** 8.5% by volume  
**Efficiency:** 65%

**MALTS**

**22.29 lb.** (10.11 kg) Crisp Maris Otter pale malt  
**4.7 lb.** (2.13 kg) Crisp 64° L brown malt  
**3 lb.** (1.17 kg) Hugh Baird's 600° L black malt

**HOPS**

**4 oz.** (112 g) UK First Gold, 6.1% a.a.  
@ 60 min  
**2.9 oz.** (82 g) Challenger, 8.4% a.a.  
@ 60 min

**YEAST**

Wyeast 1469 West Yorkshire ale yeast, 100 mL top cropped from an oatmeal stout. Or target 335B cells per 5.25 gal. with a starter.

**WATER**

Moderately low mineral water. (less than 70 ppm hardness as CaCO<sub>3</sub>). Adjust mash to room temperature pH of 5.4 with Ca(OH)<sub>2</sub>. Acidify sparge water to a room temperature pH of 5.5.

**BREWING NOTES**

Mash at 149° F (65° C) for 60 minutes (or until conversion is complete) in 8.5 gal. (32.2 L) of strike water. Lauter and sparge to collect 9.5 gal. (36 L). Boil down to 7.5 gal. (28.4 L).

**EXTRACT VERSION**

Substitute 15.5 lb. (7.03 kg) pale malt extract syrup for Maris Otter malt. Steep black and brown malts at 160° F (71° C) for 30

minutes. Drain, remove grains, dissolve extract completely in reverse osmosis water, then top off to desired boil volume. Proceed as above.

**RUNNERS-UP**

**Silver Medal:** Kevin Reinhard of Gurnee, Ill., Imperial Stout

**Bronze Medal:** Mark Ludema of Portland, Mich., Imperial Stout

**PBL**  
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## 2018 NATIONAL HOMEBREW COMPETITION

### Category 16

#### AMERICAN IPA

368 entries

**Sponsored by:**  
Experimental Brewing



**Bryan Thompson  
with Sara Smith  
Austin, Texas**

"TOF Joe IPA"  
21A American IPA

**Batch Volume:** 5 US gallons (18.9 L)  
**Original Gravity:** 1.063 (15.5° P)  
**Final Gravity:** 1.012 (3° P)  
**Bitterness:** 70 IBU  
**Color:** 4.6 SRM  
**Alcohol:** 6.7% by volume  
**Efficiency:** 70%

#### MALTS

**10 lb.** (4.54 kg) US pale two-row malt  
**2 lb.** (0.9 kg) US pale ale malt  
**1 lb.** (454 g) flaked oats  
**2 oz.** (57 g) Victory malt

#### HOPS

**0.5 oz.** (14 g) Simcoe, 12.9% a.a.  
 @ FWH  
**0.25 oz.** (7 g) Citra, 11.8% a.a. @ 5 min  
**0.25 oz.** (7 g) Idaho 7, 12.8% a.a.  
 @ 5 min  
**0.25 oz.** (7 g) Mosaic, 10.8% a.a. @ 5 min  
**0.46 oz.** (13 g) Citra, 11.8% a.a.  
 Whirlpool 1  
**0.14 oz.** (4 g) Citra Cryo, 25.2% a.a.  
 Whirlpool 1  
**0.25 oz.** (14 g) Idaho 7, 12.8% a.a.  
 Whirlpool 1  
**0.28 oz.** (8 g) Mosaic, 10.8% a.a.  
 Whirlpool 1  
**0.1 oz.** (3 g) Mosaic Cryo, 23.3% a.a.  
 Whirlpool 1  
**0.18 oz.** (5 g) Simcoe, 12.9% a.a.  
 Whirlpool 1  
**0.04 oz.** (1 g) Simcoe Cryo, 23.8% a.a.  
 Whirlpool 1  
**0.7 oz.** (20 g) Citra, 11.8% a.a.  
 Whirlpool 2  
**0.21 oz.** (6 g) Citra Cryo, 25.2% a.a.  
 Whirlpool 2  
**1.34 oz.** (38 g) Idaho 7, 12.8% a.a.  
 Whirlpool 2  
**0.56 oz.** (16 g) Mosaic, 10.8% a.a.  
 Whirlpool 2  
**0.21 oz.** (6 g) Mosaic Cryo, 23.3% a.a.  
 Whirlpool 2  
**0.28 oz.** (8 g) Simcoe, 12.9% a.a.  
 Whirlpool 2  
**0.1 oz.** (3 g) Simcoe Cryo, 23.8% a.a.  
 Whirlpool 2  
**0.1 oz.** (3 g) Citra, 11.8% a.a.  
 Dry Hop 1  
**0.07 oz.** (2 g) Citra Cryo, 25.2% a.a.  
 Dry Hop 1  
**0.25 oz.** (7 g) Idaho 7, 12.8% a.a.  
 Dry Hop 1  
**0.1 oz.** (3 g) Mosaic, 10.8% a.a.  
 Dry Hop 1  
**0.07 oz.** (2 g) Mosaic Cryo, 23.3% a.a.  
 Dry Hop 1  
**0.1 oz.** (3 g) Simcoe, 12.9% a.a.  
 Dry Hop 1  
**0.07 oz.** (2 g) Simcoe Cryo, 23.8% a.a.  
 Dry Hop 1  
**0.88 oz.** (25 g) Citra, 11.8% a.a.  
 Dry Hop 2  
**0.42 oz.** (12 g) Citra Cryo, 25.2% a.a.  
 Dry Hop 2  
**1.73 oz.** (49 g) Idaho 7, 12.8% a.a.  
 Dry Hop 2

#### ADDITIONAL INGREDIENTS

Whirlfloc @ 10 minutes

#### YEAST

Wyeast 1318 London ale, 1 L starter

#### WATER

Ca 109 ppm, Mg 13 ppm, Na 19 ppm, SO<sub>4</sub> 141 ppm, Cl 121 ppm, HCO<sub>3</sub> 0 ppm

#### BREWING NOTES

Single infusion mash at 150° F (66° C) for 60 minutes. Target 5.3 pH. Lauter then boil for 60 minutes. After flameout, allow temperature to free fall to 185° F (85° C) and add whirlpool 1 (45 minute contact time) hop addition. Continue free fall cooling to 170° F (77° C) and add whirlpool 2 (30 minute contact time) addition. Knockout. Pitch yeast starter along with dry hop 1. Ferment at 66° F (19° C). On day 5, add dry hop 2 and allow temp to free rise to 73° F (23° C). Cold crash when fully attenuated. Force carbonate to 2.6 vol. (5.2 g/L) CO<sub>2</sub>.

#### EXTRACT VERSION

Substitute 6.7 lb. (3.04 kg) pale malt extract syrup for pale ale malt and all but 2 lb. (0.9 kg) of the two-row malt. Mash oats, Victory malt and the 2 lb. (0.9 kg) two-row malt at 150° F (66° C) for 45 minutes in 3.9 qt. (3.7 L) water. Drain, remove grains, dissolve extract completely, and top off to desired boil volume. Proceed as above.

#### RUNNERS-UP

**Silver Medal:** Remi Bonnart of Fort Collins, Colo., Liquid Poets, American IPA

**Bronze Medal:** Daniel Bryg of Brooklyn, N.Y., Brooklyn Brewers, American IPA



Find past winners' homebrew recipes on our website  
 @ HomebrewersAssociation.org/homebrew-recipes



## Category 17

**SPECIALTY IPA**

346 entries

**Sponsored by:**

Hop Growers of America



**Michael Rogers**  
**Wichita, Kan.**

Wichita Homebrewers Organization (WHO)

AHA 2018 Homebrewer of the Year

**"Nuclear Winter"**

21B Specialty IPA—White IPA with Belgian Pilsner malt, coriander, and bitter orange peel

**Batch Volume:** 5 US gallons (18.9 L)**Original Gravity:** 1.054 (13.3° P)**Final Gravity:** 1.019 (4.8° P)**Bitterness:** 55 IBU**Color:** 4.5 SRM**Alcohol:** 4.6% by volume**Efficiency:** 80%**MALTS****6.5 lb.** (2.95 kg) Pilsner malt**2.25 lb.** (1.02 kg) wheat malt**23 oz.** (652 g) flaked wheat**8 oz.** (227 g) rice hulls**HOPS****1 oz.** (28 g) Magnum, 10.8% a.a.

@ 60 min

**1 oz.** (28 g) Citra, 12.8% a.a. @ 0 min**1 oz.** (28 g) Centennial, 8.7% a.a.

@ 0 min

**0.5 oz.** (14 g) Cascade, 6.4% a.a.

@ 0 min

**1 oz.** (28 g) Citra whole leaf, dry hop in keg**WATER**

Wichita tap water

**7 mL** lactic acid @ second to last stage of mash**4 mL** lactic acid @ 60 min of boil**ADDITIONAL INGREDIENTS****5 oz.** (142 g) dextrose @ 30 min**1 tsp.** (5 g) Irish moss @ 15 min**0.5 tsp.** (2.5 g) Wyeast yeast nutrient @ 10 min**0.25 oz.** (7 g) fresh ground coriander @ 5 min**0.50 oz.** (14 g) fresh ground bitter orange peel @ 5 min**YEAST**

Wyeast 3787 Trappist High Gravity yeast, 2 qt. starter

**BREWING NOTES**

Use a step infusion mash at 127° F (53° C) for 15 minutes, 146° F (63° C) for 25 minutes, 162° F (72° C) for 20 minutes, and 172° F (78° C) for 5 minutes. Allow hops at flameout to sit for 20 min. before cooling to 68° F (20° C). Add yeast and ferment for 9 days at 68° F (20° C), rack to secondary for 9 days, keg and add dry hop. Dry hop using Citra whole leaf hops (12.9% a.a.) in muslin bag with four large marbles to sink it, tied to keg stem. If bottling, add dry hop to secondary.

**EXTRACT VERSION**

Substitute 4.75 lb. (2.15 kg) Pilsner malt extract syrup for Pilsner malt. Mash wheat malt with flaked wheat at 150° F (66° C) for 45 minutes. Drain, remove grains, dissolve extract completely in reverse osmosis water, then top off to desired boil volume. Proceed as above.

**RUNNERS-UP****Silver Medal:** Isaac Miller of Portland, Ore., Oregon Brew Crew, Specialty IPA**Bronze Medal:** Darrell Ades of Oceanside, Calif., Specialty IPA

## Category 18

**AMERICAN STRONG ALE**

271 entries

**Sponsored by:**

Hopsteiner



**Chris Burgess**  
**Rocklin, Calif.**

Brewing Network

**"Suicide Mission"**

Double IPA

**Batch Volume:** 6 US gallons (22.7 L)**Original Gravity:** 1.068 (16.5° P)**Final Gravity:** 1.010 (2.5° P)**Bitterness:** 68 IBU**Color:** 4 SRM**Alcohol:** 7.5% by volume**Efficiency:** 77%**MALTS****9 lb.** (4.08 kg) Pilsner malt**2 lb.** (0.9 kg) oats**2 lb.** (0.9 kg) pale two-row malt**4 oz.** (113 g) honey malt**10 oz.** (283 g) dextrose in boil**HOPS****0.35 oz.** (10 g) Columbus, 14% a.a. @ 60 min**1.5 oz.** (42.5 g) Mosaic, 12.5% a.a. @ 10 min**3 oz.** (85 g) Mosaic, 12.5% a.a. @ 0 min, whirlpool 20 min**0.75 oz.** (10 g) Columbus, 14% a.a. @ 0 min, whirlpool 20 min**0.75 oz.** (10 g) El Dorado, 14.3% a.a. @ 0 min, whirlpool 20 min**2 oz.** (57 g) LupuLN2 Citra Cryo pellets, 23% a.a., dry hop 6 days**2 oz.** (57 g) Mosaic, 12.5% a.a., dry hop 6 days**1 oz.** (28 g) Columbus, 14% a.a., dry hop 6 days**1 oz.** (28 g) LupuLN2 Mosaic Cryo pellets, 24% a.a., dry hop 6 days*Continued >>*



## 2018 NATIONAL HOMEBREW COMPETITION

### YEAST

Imperial #A07 Flagship ale yeast, starter or multiple packs

### WATER

Mash pH of 5.45, pre-boil pH of 5.25, flameout pH of 5.0–5.1. Add acid where needed to hit these numbers. Acidify sparge water to 5.6 pH. Target a water profile of 140 ppm Ca, 50 ppm Mg: 20 ppm Na, 300 ppm SO<sub>4</sub> and 75 ppm Cl.

### BREWING NOTES

Mash in at 149° F (65° C) and hold for 50 min. Mash out at 168° F (76° C) for 10 min. Fly sparge at 168° F (76° C). Add dextrose and boil 60 minutes. Whirlpool with flameout hops for 20 minutes, and then cool. Oxygenate and pitch an adequate amount of yeast (a starter or multiple packages of yeast) according to mrmalty.

com. Don't significantly overpitch. Ferment at 67° F (19° C). After a successful forced diacetyl test, cool the beer to 53° F (12° C) for two days. Dump the yeast and trub, if fermenting in a conical, then add the dry hops, back-flushing with CO<sub>2</sub> or bubbling CO<sub>2</sub> through the fermenter while adding the hops, if possible. Let the fermenter rise to 67° F (19° C) again during the dry hop. The large dry hop amount will likely add another few points of attenuation. After six days, cool the fermenter to 40° F (4° C) for two days, again dumping hops and remaining yeast, if possible. Fine with 15 mL of BioFine, agitating the beer with CO<sub>2</sub> to mix it in thoroughly. Allow the beer to settle and clarify for two days before transferring it to a keg. Try to avoid introducing oxygen into the finished beer as much as possible (e.g. flush transfer lines with CO<sub>2</sub> immediately before the transfer, completely seal the

fermenter or keep slight positive pressure on the fermenter during the cold crash and perform a closed transfer to the keg).

### EXTRACT VERSION

Substitute 6.75 lb. (3.06 kg) Pilsner malt extract syrup for Pilsner malt. Mash oats, pale malt, and honey malt at 150° F (66° C) in 5.3 qt. (5 L) reverse osmosis (RO) water for 45 minutes. Drain, remove grains, rinse, and dissolve extract completely in the resulting wort, then top off to desired boil volume with more RO water. Proceed as above.

### RUNNERS-UP

**Silver Medal:** Shawn McCarty, Fergus Falls, Minn., with Jill Balgaard, Double IPA

**Bronze Medal:** Sean Monahan, Martinez, Calif., Diablo Order of Zymiracle Enthusiasts (DOZE), American Barleywine

### Category 19

#### STRONG BRITISH ALE

193 entries

##### Sponsored by:

TurnKey Brewery & Restaurant Consulting



David Byer

with John O'Brien  
Hot Springs, N.C.

Mountain Ale and Lager Tasters (MALT)

"Don't Swallow the Cap"  
17D English Barleywine

**Batch Volume:** 6 US gallons (22.7 L)  
**Original Gravity:** 1.114 (26.8° P)  
**Final Gravity:** 1.036 (9° P)  
**Bitterness:** 38 IBU  
**Color:** 22 SRM  
**Alcohol:** 10.5% by volume  
**Efficiency:** 57%

### MALTS

- 10 lb.** (4.54 kg) Thomas Fawcett Maris Otter pale malt
- 10 lb.** (4.54 kg) Durst 3° L Vienna malt
- 3 lb.** (1.36 kg) Muntons 60° L crystal malt
- 2 lb.** (0.9 kg) Crisp 27° L amber malt
- 2 lb.** (0.9 kg) Dingemans 24° L biscuit malt
- 1.5 lb.** (0.68 kg) Briess Carapils malt
- 1.5 lb.** (0.68 kg) Briess white wheat malt
- 1 lb.** (454 g) demerara sugar at flame out
- 0.75 lb.** (340 g) Briess 20° L caramel malt

### HOPS

- 1.4 oz.** (40 g) Willamette, 6% a.a. @ 60 min
- 0.5 oz.** (14 g) Fuggle, 4.1% a.a. @ 60 min
- 0.5 oz.** (14 g) Fuggle, 4.1% a.a. @ 45 min
- 0.5 oz.** (14 g) Fuggle, 4.1% a.a. @ 30 min
- 0.5 oz.** (14 g) Fuggle, 4.1% a.a. @ 5 min

### WATER

- 10 g.** calcium chloride in the first mash, using very soft well water (close to reverse osmosis)

### ADDITIONAL INGREDIENTS

- 1 tab** Whirlfloc @ 10 min
- 0.5 tsp.** (2.5 g) Wyeast yeast nutrient @ 10 min

### YEAST

WLP002 English Ale, 1 pack, 3.6 L starter

### BREWING NOTES

This beer was made with a reiterated mash in which wort from the first mash was used as brewing liquor for the second mash. The Maris Otter and half of the specialty grains (except the C20) were first mashed at 154° F (68° C) for 60 minutes, which was followed by a batch sparge to achieve a total wort volume of 11.37 gal. (43 L). After that, 5.4 gal. 20.4 L) of this wort was heated to 164° F (73° C) and used to mash the remaining grains for a second mash to hit 150° F (66° C) for 60 minutes. The remaining first runnings were heated and used to batch sparge the second mash. The reiterated mash allows you to hit a higher OG when the mash tun size is a limiting factor. It is also said to help enhance the malt flavors. Boil for 120 minutes.

Chill to 65° F (18° C). Oxygenate 120 seconds with pure oxygen at 0.5 L/min. Let free rise and ferment at 68° F (20° C) for three days. Then let rise slowly to 71° F (22° C) over two days. Hold for 15 more days. Crash chill to 37° F (3° C) over two days. Keg carbonate to 12 PSI while keeping at 37° F (3° C) for 8 days. The beer was then aged

*Continued >>*



in a cellar environment with slow seasonal fluctuations (mid-40s to mid-60s °F or 7–18° C) for 200 days, bottled, and then kept at 37° F (3° C).

#### EXTRACT VERSION

Substitute 6 lb. (2.72 kg) pale malt extract syrup for pale Maris Otter malt and 6 lb.

(2.72 kg) Vienna malt extract syrup for Vienna malt. Mash remaining grains at 154° F (68° C) for 30 minutes in 13.4 qt. (12.7 L) water. Drain, remove grains, dissolve extract completely, and top off to desired boil volume. Proceed as above, adding demerara sugar at flameout.

#### RUNNERS-UP

**Silver Medal:** Christopher Clark, Tracy, Calif., Mad Zymurgists, Wee Heavy

**Bronze Medal:** Jeremiah Mount, Overland Park, Kan., Johnson County Brewing Society, English Barleywine

#### Category 20

##### SAISON

232 entries

##### Sponsored by:

Hops Direct



**Paul Scrom  
with Nick Rosenberg**  
**Commack, N.Y.**

Long Island Beer & Malt Enthusiasts

"Saison"

25B Saison – pale table saison

**Batch Volume:** 5 US gallons (18.9 L)

**Original Gravity:** 1.041 (10.3° P)

**Final Gravity:** 1.005 (1.3° P)

**Bitterness:** 27 IBU

**Color:** 3.2 SRM

**Alcohol:** 4.7% by volume

**Efficiency:** 80%

##### MALTS

**8 lb.** (3.63 kg) pale two-row malt

**4 oz.** (113 g) rye malt

**4 oz.** (113 g) dextrin malt

##### HOPS

**1 oz.** (28 g) Styrian Goldings @ 60 min

**0.5 oz.** (14 g) Styrian Goldings @ 45 min

**1 oz.** (28 g) Sorachi Ace @ 0 min

##### YEAST

Belle Saison dry yeast

##### BREWING NOTES

Use tap water. Mash at 152° F (67° C) for 90 minutes. Batch sparge at 169° F (76° C) and

boil 60 minutes. Ferment at 70° F (21° C), then allow to free rise to 80° F (27° C) after 3 days, and to 85° F (29° C) after 5 days, with a total of 14 days in primary. Serve with mid to high carbonation.

#### EXTRACT VERSION

Substitute 6.5 lb. (2.95 kg) pale malt extract syrup for pale malt and 6 oz. (170 g) rye malt extract for rye malt. Omit dextrin malt. Dissolve extract completely in reverse osmosis water, then top off to desired boil volume. Proceed as above.

#### RUNNERS-UP

**Silver Medal:** Christopher Owen, Louisville, Ky., Mad Zymurgists, Louisville Area Grain and Extract Research Society, LTD, Saison

**Bronze Medal:** David Fetty, Darien, Ill., Brixie's Brewers, Saison

#### Category 21

##### BELGIAN ALE

202 entries

##### Sponsored by:

Port Brewing Company/The Lost Abbey



**Thomas Kinzer  
Milwaukie, Ore.**

Men Who Stare at Airlocks

"Brunchmaster 2000"

24A Witbier

**Batch Volume:** 5.5 US gallons (20.8 L)

**Original Gravity:** 1.050 (12.5° P)

**Final Gravity:** 1.012 (3° P)

**Bitterness:** 18 IBU

**Color:** 3–4 SRM

**Alcohol:** 5% by volume

**Efficiency:** 71%

##### MALTS

**6 lb.** (2.72 kg) flaked wheat

**4.5 lb.** (2.04 kg) Briess pale two-row malt

**4 oz.** (113 g) flaked oats

##### HOPS

**0.65 oz.** (18 g) Amarillo, 9% a.a. @ 20 min

**0.5 oz.** (14 g) Amarillo, 9% a.a. @ 15 min

**1 oz.** (28 g) Amarillo, 9% a.a. @ 0 min

##### WATER

Malt-forward (CaCl 75–100% of Ca additions) water profile that is appropriate for your water. Resist the urge to use gypsum to boost hop crispness; this is a round, balanced to malty beer with heavy hop aroma and flavor, not bitterness.

##### ADDITIONAL INGREDIENTS

**0.1 oz.** (2.8 g) freshly ground coriander @ 5 min

**0.1 oz.** (2.8 g) freshly ground bitter orange peel @ 5 min

*Continued >>*



## 2018 NATIONAL HOMEBREW COMPETITION

**0.25 tsp.** (1.2 g) Wyeast yeast nutrient  
@ 1 min

### YEAST

Wyeast 3944 Belgian Witbier, 1 L starter

### BREWING NOTES

Use BIAB single infusion mash at 152° F (67° C) for 90 to 120 minutes. Stir occasionally, keeping mash between 150 and 152° F (66 and 67° C). Remove bag. Measure gravity, adjust volumes for gravity vs. evaporation rate/boil length if needed to hit target OG of 1.050 and begin boil. It's very important that you chill immediately and quickly because this is a hop-bursted beer. Delays will cause

the beer to be too bitter. Chill to 64° F (18° C), oxygenate and pitch. Fermentation should start low and finish high: let primary free-rise gradually over the course of two weeks, bumping with heat, if needed later in the fermentation, to finish at 78° F (26° C) at the very end. Let sit in primary at 78° F (26° C) for a few days and keg, then chill and carbonate to taste (high level for wit). Ready to drink as soon as it is carbonated.

Do not add more coriander or orange peel to the recipe. Let the Amarillo do the heavy orange lifting. Watch your base malt's diastatic power, too. Briess 2-row has worked

for me, but other malts might have issues fully converting so much adjunct.

### EXTRACT VERSION

Due to high level of adjunct grains, an extract version is not recommended.

### RUNNERS-UP

**Silver Medal:** James Moore, Fleming Island, Fla., with John Keane, Cowford Ale Sharing Klub (CASK), Bière de Garde

**Bronze Medal:** Krzysztof Lasocki, New Haven, Conn., Brew Haven, Bière de Garde

## Category 22

### STRONG BELGIAN ALE

351 entries

**Sponsored by:**  
Cargill Craft Malt



**Jack Price**  
**Milford, Del.**  
Delmarva United Homebrewers

"Golden Diablo"  
25C Belgian Golden Strong Ale

**Batch Volume:** 9 US gallons (34.1 L)  
**Original Gravity:** 1.066 (16.25° P)  
**Final Gravity:** 1.007 (1.75° P)  
**Bitterness:** 32 IBU  
**Color:** 2.8 SRM  
**Alcohol:** 7.8% by volume  
**Efficiency:** 73.6%

### MALTS

**15 lb.** (6.8 kg) 1.1° L Belgian Pilsner malt  
**3 lb.** (1.36 kg) 2° L German Pilsner malt  
**4 oz.** (113 g) acidulated malt

### HOPS

**2.4 oz.** (68 g) Styrian Goldings, 4.5% a.a.  
@ 65 min  
**2 oz.** (57 g) Saaz, 3.5% a.a. @ 15 min

### WATER

3.8 g/7 gal. mash water salt (NaCl)  
0.83 g/7 gal. mash water Epsom salt  
1.0 tsp./7 gal. mash water gypsum  
5.0 mL lactic acid to mash to achieve pH 5.2  
3.2 mL lactic acid to sparge water (filtered tap water adjusted to Antwerp, Belgium profile)

### OTHER FERMENTABLES

**2 lb.** (0.9 kg) corn sugar in boil  
**1.5 lb.** (0.68 kg) corn sugar primary  
**5 oz.** (142 g) corn sugar to prime

### ADDITIONAL INGREDIENTS

**1 tab** Whirlfloc @ 10 min  
**1 tsp.** (5 g) yeast nutrient

### YEAST

**2 packs** White Labs WLP570 Belgian Golden Ale, 1.6 L starter  
**0.25 tsp.** (1.2 g) Lallemand CBC-1 yeast (at bottling)

### BREWING NOTES

Add salt adjustments to mash to achieve Belgian water profile. Mash in at 147° F (64° C) and hold for 60 minutes. Water-to-grain ratio should be 1.25 qt./lb. (2.5 L/kg). Heat mash to 151° F (66° C) and hold for 30 minutes. Vorlauf for 10 to 15 minutes and

mash out at 168° F (76° C) for 10 minutes. Fly sparge over 30 minutes. Boil 90 minutes. Start fermentation at 64° F (18° C) and increase one degree per day, ending at 78° F (26° C). On day three, boil 1.5 lb. (0.68 kg) of dextrose with enough water to make simple syrup, cool, and add to fermenter. After primary fermentation, rack to secondary, cold crash, and hold at 32° F (0° C) for 21 days. Carbonate to 3.5 vol. (7 g/L).

### EXTRACT VERSION

Substitute 11.5 lb. (5.27 kg) Pilsner malt extract syrup for the Belgian Pilsner malt, German Pilsner malt, and acidulated malt. Dissolve extract completely in reverse osmosis water, top off to desired boil volume, and proceed as above.

### RUNNERS-UP

**Silver Medal:** Eric Blaine, Maplewood, N.J., Morris Area Society of Homebrewers, Belgian Dark Strong Ale

**Bronze Medal:** Joseph Megali, Terre Haute, Ind., Wabash Valley Fermentation 'N Ale, Belgian Dark Strong Ale



## Category 23

**EUROPEAN SOUR ALE**

207 entries

**Sponsored by:**

Captain Lawrence Brewing Co.



**Kevin Foster**  
**Houston, Texas**

Cane Island Alers (CIA)

"Cuvee 863"  
23E Gueuze

**Batch Volume:** 17 US gallons (64.4 L)  
**Original Gravity:** 1.048 (12° P)  
**Final Gravity:** 1.014 (3.5° P)

**Bitterness:** 2 IBU  
**Color:** 3 SRM  
**Alcohol:** 5.2% by volume  
**Efficiency:** 78%

**MALTS**

**17.75 lb.** (8.05 kg) Belgian Pilsner malt  
**9.25 lb.** (4.2 kg) unmalted wheat  
**1.5 lb.** (0.66 kg) Belgian pale ale malt

**HOPS**

**4.25 oz.** (120 g) aged (debittered) hops  
 @ 240 min

**WATER**

Yellow balanced profile in Bru'n Water

**ADDITIONAL INGREDIENTS**

**2 tabs** Servomyces yeast nutrient  
**1 tsp.** (5g) yeast nutrient

**YEAST**

**3 vials** ECY01 BugFarm culture  
 bottle dregs added intermittently during  
 fermentation

**BREWING NOTES**

Mash modeled after Cantillon's traditional turbid mash, with rests at 113° F (45° C) for 20 minutes; 136° F (58° C) for 20 minutes; 150° F (66° C) for 30 minutes; 162° F (72° C) for 30 minutes; and 168° F (76° C) for 10 minutes. Fly sparge with 190° F (88° C) water. Primary fermented and aged for about a year at 72° F (22° C) in a 15 gal. (57 L) neutral oak barrel.

The beer entered into this competition was a blend of five different beers. Three were different batches of this recipe that were between one and three years old. One was an unsoured Belgian blonde with *Brettanomyces*. The fifth was another golden sour of a much simpler recipe. The blend was bulk aged for two additional months before bottle conditioning with some fresh CBC-1 yeast.

**RUNNERS-UP**

**Silver Medal:** John Hocking, Tacoma,  
 Wash., Browns Point Homebrew Club,  
 Fruit Lambic

**Bronze Medal:** Brian Hall, Anchorage,  
 Alaska, The Bru Club, Fruit Lambic

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## 2018 NATIONAL HOMEBREW COMPETITION

Category 24

### FRUIT BEER

291 entries

**Sponsored by:**

Amoretti



**Matt Cronin**  
**Silver Spring, Md.**

"Das Pash"

29A Fruit Beer – Berliner Weisse  
with Passion Fruit

**Batch Volume:** 5.5 US gallons (20.8 L)  
**Original Gravity:** 1.043 (10.8° P)  
**Final Gravity:** 1.011 (2.8° P)  
**Bitterness:** 20 IBU  
**Color:** 3.5 SRM  
**Alcohol:** 4.3% by volume  
**Efficiency:** 75%

#### MALTS

- 5 lb.** (2.27 kg) Pilsner malt
- 4 lb.** (1.81 kg) wheat malt
- 2 oz.** (57 g) acidulated malt (to achieve desired pH)

#### HOPS

- 0.5 oz.** (14 g) Magnum @ 30 min
- 0.5 oz.** (14 g) Simcoe, 15 min whirlpool

#### WATER

Reverse osmosis with 1.5 g/gal. CaCl<sub>2</sub>, 1 g/gal. gypsum, 0.25 g/gal. Mg, 0.25 g/gal. Na. Total water 10 gal. (37.9 L)

#### OTHER FERMENTABLES

- 2 cans** (2.78 kg) Vintner's Harvest passion fruit puree, 2.8–3.3 pH, 11–14° P
- 1.5 lb.** (0.68 kg) corn sugar in primary
- 5 oz.** (142 g) corn sugar to prime

#### ADDITIONAL INGREDIENTS

- 1 tsp.** (5g) Irish moss @ 5 min
- 1 tsp.** (5g) yeast nutrient @ 10 min

#### YEAST

Wyeast 1318 London Ale III pitch from previous batch, 1 L starter

**2 packs** Omega OYL-605 Lactobacillus Blend (Plantarum and Brevis)

#### BREWING NOTES

Mash at 150° F (66° C) with pH of 5.2–5.3. Rack 6 gal. (22.7 L) to boil kettle and boil for 15 minutes. Cool to 95° F (35° C) and rack

to a 5 gal. keg at 1.042 (10.5° P). Use lactic acid to lower wort pH to 4.7–4.8 if needed and pitch Lacto Blend. Bubble CO<sub>2</sub> through keg and maintain a blanket of CO<sub>2</sub> over the surface. After 72 hours, check that pH is within 3.45–3.5 target. Push soured wort with CO<sub>2</sub> to boil kettle and boil 75 minutes with hops, yeast nutrient, and Irish moss additions. Add reverse osmosis water for 5.5 gal. (20.8 L) yield at 1.043 (10.8° P).

Cool, rack to primary, pitch the Wyeast 1318 London Ale III yeast starter at 64° F (18° C), and oxygenate. Ferment at 64° F (18° C), letting it rise to 68° F (20° C) by day 8.

Transfer beer with CO<sub>2</sub> onto passion fruit puree in CO<sub>2</sub>-purged corny keg. After 7 days, cold crash to 34° F (1° C). Rack to serving keg and carbonate to 2.8 vol. (5.6 g/L) CO<sub>2</sub>.

#### EXTRACT VERSION

Substitute 2.6 lb. (1.18 kg) Pilsner malt extract syrup for Pilsner malt. Substitute 4 lb. (1.81 kg) wheat malt extract syrup for wheat malt. Omit acidulated malt. Dissolve extracts completely in reverse osmosis water, then top off to desired boil volume. Proceed as above.

#### RUNNERS-UP

**Silver Medal:** Adam Dawson, West Allis, Wis., with Sarah Dawson, Fruit Beer

**Bronze Medal:** George Schuster, Petaluma, Calif., Fruit Beer

Category 25

### SPICED BEER

398 entries

**Sponsored by:**  
BottleYourBrand.com



**Mark Boelman**

**Loveland, Colo.**

Weiz Guys

"Dr. Mantis Toboggan"

30C Winter Seasonal Beer -  
Oatmeal Raisin Cookie British Brown  
with ginger, cinnamon, and rum-soaked  
black Corinth raisins

**Batch Volume:** 6 US gallons (22.7 L)

**Original Gravity:** 1.070 (17.1° P)

**Final Gravity:** 1.010 (2.5° P)

**Bitterness:** 25 IBU

**Color:** 14 SRM

**Alcohol:** 7.9% by volume

**Efficiency:** 72%

#### MALTS

- 11 lb.** (4.99 kg) Maris Otter malt
- 2 lb.** (0.9 kg) 10° L Munich malt
- 1 lb.** (454 g) flaked oats
- 0.5 lb.** (227 g) oat malt

**5.3 oz.** (150 g) Special B malt

**1.9 oz.** (54 g) Carafa III malt

#### HOPS

**0.75 oz.** (21 g) Magnum @ 60 min

#### ADDITIONAL INGREDIENTS

- 2 Tbsp.** (11 g) organic powdered ginger at flame out
- 12 oz.** (340 g) organic Corinth raisins
- Organic crushed cinnamon sticks
- Vodka
- Spiced rum

#### YEAST

Inland Island NorCal yeast

*Continued >>*

**WATER**

Rocky Mountain tap water, carbon filtered. Our water here is 8 ppm Ca, 2 ppm Mg, 15 ppm SO<sub>4</sub>, 2.5 ppm Cl.

**BREWING NOTES**

On or before brew day create tincture of 4 oz. (125 mL) vodka and organic crushed cinnamon sticks, added to taste during packaging. I added 50 mL of cinnamon tincture to keg.

On or before brew day, chop 12 oz. (340 g) organic black Corinth raisins and place them in a Mason jar. Fill jar with your favorite spiced rum. After kegging, dry spice with rum-infused raisins in muslin bag until preferred taste is reached.

Flaked oats should be oven toasted until golden brown. Mash at 150° F (66° C) for

60 minutes. Boil 60 minutes. Ferment at 66° F (19° C) degrees. Raise to 70° F (21° C) when fermentation slows.

This beer was part of our club's "Wort Challenge." Grimm Brothers Brewing in Loveland, Colo. mashed 85% Root Shoot pale malt and 15% Root Shoot Munich malt to create a 1.040 wort. Each club member took home 5 gallons. The beer that won used the grain listed above in the mash but then was also partially sparged with 2.5 gal. of the Grimm Brothers blend. Beer that medaled was 8 months old at time of competition, a good indication that the spices and alcohols perhaps need a little time to mellow. Special thanks to Drew Beechum for the recipe bones and inspiration!

**EXTRACT VERSION**

Substitute 6.1 lb. (2.77 kg) pale malt extract syrup for all but 2 lb. (0.9 kg) of the Maris Otter malt. Mash the 2 lb. Maris Otter with remaining grains for 45 minutes at 150° F (66° C) in 7.4 qt. (7 L) water. Drain, remove grains, dissolve extract completely, and top off to desired boil volume. Proceed as above.

**RUNNERS-UP**

**Silver Medal:** Thien Le, Anaheim, Calif., Orange County Mash Ups, Spice, Herb or Vegetable Beer

**Bronze Medal:** Joe Wohlscheid, Battle Creek, Mich., The Bru Club, Spice, Herb or Vegetable Beer

## Category 26

**SMOKE-FLAVORED & WOOD-AGED BEER**

454 entries

**Sponsored by:**

Alaskan Brewing Co.



**Sean Kampshoff**  
**Minneapolis, Minn.**

Primary Fermenters Brewers & Vintners

**"Death Spiral"**

33B Specialty Wood-Aged Beer – Whiskey barrel-aged English barleywine

<b>Batch Volume:</b>	12.25 US gallons (46.4 L)
<b>Original Gravity:</b>	1.117 (27.5° P)
<b>Final Gravity:</b>	1.028 (7° P)
<b>Bitterness:</b>	75 IBU
<b>Color:</b>	22 SRM
<b>Alcohol:</b>	12% by volume
<b>Efficiency:</b>	70%

**MALTS**

<b>41.75 lb.</b>	(18.94 kg) Crisp Maris Otter pale malt
<b>2.5 lb.</b>	(1.13 kg) extra light dry malt extract
<b>2.5 lb.</b>	(1.13 kg) cane sugar
<b>2.31 lb.</b>	(1.05 kg) UK 60° L crystal malt
<b>2 lb.</b>	(0.9 kg) Dingemans 150° L Special B malt
<b>4 oz.</b>	(113 g) Fawcett 200° L pale chocolate malt

**HOPS**

<b>4.25 oz.</b>	(120 g) Magnum, 12% a.a. @ 60 min
<b>1 oz.</b>	(28 g) East Kent Goldings, 4.5% a.a. @ 10 min
<b>2 oz.</b>	(57 g) East Kent Goldings, 4.5% a.a. @ 0 min

**ADDITIONAL INGREDIENTS**

<b>2 tabs</b>	Servomyces yeast nutrient
<b>1 tab</b>	Whirlfloc

**YEAST**

4 packs White Labs WLP007 Dry English ale yeast, 4 L starter

**BREWING NOTES**

Single infusion mash at 148° F (64° C) for 90 minutes, mash out at 168° F (76° C).

Collect first runnings, sparge with enough water to reach pre-boil volume, and boil for 60 minutes. Oxygenate, pitch yeast, and ferment at 68° F (20° C).

Acquire as large a whiskey barrel as you can handle. This entry was aged in a 15 gal. (56.8 L) whiskey barrel for 9 months. Brew enough batches to allow for top up during aging as well as to potentially blend back if barrel character becomes too pronounced.

**EXTRACT VERSION**

Increase extra light dry malt extract to 27.75 lb. (12.6 kg). Omit Maris Otter pale malt. Steep remaining grains at 160° F (71° C) for 30 minutes in 5.7 qt. (5.4 L) water. Rinse, remove grains, dissolve extract and cane sugar completely, top off to desired boil volume, and proceed as above.

**RUNNERS-UP**

**Silver Medal:** Ross Druckenmiller, Brighton, Mass., Boston Wort Processors, Classic Style Smoked Beer

**Bronze Medal:** Mark Denys, Wyndmoor, Pa., Philadelphia Homebrew Club, Specialty Wood-Aged Beer



## 2018 NATIONAL HOMEBREW COMPETITION

Category 27

### AMERICAN WILD ALE

305 entries

#### Sponsored by:

Maryland Homebrew



**Tony Schubert**

**Des Moines, Iowa**

Iowa Brewers Union

"Blue Barrel Sour"

28B Mixed Fermentation Sour Beer –

Barrel-aged Brett golden sour

**Batch Volume:** 5.5 US gallons (20.8 L)

**Original Gravity:** 1.050 (12.5° P)

**Final Gravity:** 1.008 (2° P)

**Bitterness:** 10 IBU

**Color:** 4.2 SRM  
**Alcohol:** 5.5% by volume  
**Efficiency:** 70%

#### MALTS

**3.5 lb.** (1.59 kg) German wheat malt  
**2.5 lb.** (1.13 kg) German Pilsner malt  
**1 lb.** (454 g) torrified wheat  
**1 lb.** (454 g) acidulated malt  
**1 lb.** (454 g) unmalted wheat  
**12 oz.** (340 g) unmalted barley  
**12 oz.** (340 g) Weyermann light Munich malt  
**8 oz.** (227 g) flaked oats

#### HOPS

**1.4 oz.** (40 g) aged hops, 2% a.a. @ 60 min

#### WATER

Half reverse osmosis and half charcoal-filtered tap water

#### ADDITIONAL INGREDIENTS

**8 oz.** (227 g) flaked oats @ 10 min  
 Rice hulls as needed for lautering

#### YEAST

Primary: White Labs American Hefeweizen

WLP320, 1 pack in a starter. At Fill/Solera: Add 1 to 2 vials Brett B/C in a starter. Occasional cultures and/or dregs may be necessary depending on desired flavor profile.

#### BREWING NOTES

Age hops in open bags for over a year, or until they smell more of hay than cheese. Unmalted grains and boiled oats make the total efficiency lower than calculated. Step mash starting at 130° F (54° C), raising to 160° F (71° C) over an hour. Sparge at 170° F (77° C). Boil 90 min., adding hops at 60 minutes, kettle oats at 10 minutes, and yeast nutrient at 10 minutes. Ferment 2 weeks at 65° F (18° C) and Solera turn no sooner than 3 months in a 15 gal. (56.8 L) barrel.

Although a neutral/wine barrel is preferred, I obtained this 15 gal. barrel from a friend in the club who had been aging excellent sour beer in it. Initially, he had opened the barrel and stripped it of char. It also had a hefty Brett culture thriving in it when I filled it. I have waxed around 2/3 of the staves and one head. After each Solera turn, I top off the headspace with a starter of whatever Brett culture I can buy at my LHBS at that time.

Periodically I also add dregs of good beers that are in the same vein as this golden sour ale and conditioned without wine yeast. After kegging, keep at room temp until tetrahydropyridine (THP), if any, is aged out of the beer. Force carbonate medium-high/high.

#### EXTRACT VERSION

Substitute 3 lb. (1.36 kg) wheat malt extract syrup for all the Pilsner malt and all but 1.75 lb. (0.79 kg) wheat malt. Mash 1.75 lb. wheat malt with remaining grains, reserving half the oats for the boil. Rinse, remove grains, dissolve extract completely in reverse osmosis water, then top off to desired boil volume. Proceed as above.

#### RUNNERS-UP

**Silver Medal:** Andrew Williams, Seattle, Wash., North Seattle Homebrew Club, Mixed Fermentation Sour Beer

**Bronze Medal:** Patrick Elder, Houston, Texas, Plainfield Ale and Lager Enthusiasts (PALE), Wild Specialty Beer

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## Category 28

**SPECIALTY BEER**

181 entries

**Sponsored by:**

Smart Brew Kit



**Lucas Orr**  
**San Diego, Calif.**

QUAFF

(Quality Ale and Fermentation Fraternity)

"Scottish Crème Brulee"

34C Experimental Beer - Wee Heavy  
with lactose, vanilla, and caramelized  
sugar, bottled on nitro**Batch Volume:** 5.5 US gallons (20.8 L)**Original Gravity:** 1.083 (20° P)**Final Gravity:** 1.029 (7.3° P)**Bitterness:** 21 IBU**Color:** 16 SRM**Alcohol:** 7.1% by volume**Efficiency:** 78%**MALTS**

- 7.5 lb.** (3.4 kg) UK Maris Otter pale malt
- 3 lb.** (1.36 kg) UK Golden Promise pale malt
- 2.5 lb.** (1.13 kg) German melanoidin malt
- 1 lb.** (454 g) Canadian honey malt
- 8 oz.** (227 g) US 80° L crystal malt
- 1.75 oz.** (50 g) turbinado sugar, caramelized dark (not burnt), in boil

**HOPS**

- 1 oz. (28 g) East Kent Goldings, 5.5%  
a.a. @ 60 min
- 1 oz. (28 g) East Kent Goldings, 5.5%  
a.a. @ 5 min

**ADDITIONAL INGREDIENTS**

- 13 oz.** (369 kg) lactose @ 0 min
- 1** vanilla bean, split and scraped @ 5 min
- 1** vanilla bean, split and scraped (secondary)
- 1 tab** Whirlfloc @ 15 min

**YEAST**

- 2 packs** WLP028 Scottish Ale Yeast added directly to fermenter

**BREWING NOTES**

Caramelize turbinado sugar in a saucepan with a small amount of water to your desired level of darkness.

Mash grains at 156° F (69° C) for 60 minutes or until conversion is complete. Vorlauf until clear. Collect wort and boil for 70 minutes.

Knockout and ferment at 55° F (13° C) for 3 days in primary. Raise temperature to 62° F (17° C) and allow fermentation to complete.

Allow to rest 2 days and rack to secondary purged with CO<sub>2</sub>. Raise temperature to 70° F (21° C). Split and scrape second vanilla bean and add to secondary. Allow to remain in carboy at 70° F for 2–3 weeks.

Force carbonate using beer gas (nitrogen and CO<sub>2</sub> blend) to reach 2.0 vol. (4 g/L). Serve at 52–56° F (11–13° C) on nitro tap for best results. Normal carbonation is fine but nitro is preferred. This beer ages well under proper conditions, though some vanilla flavors may decrease with time.

**EXTRACT VERSION**

Substitute 7.75 lb. (3.52 kg) Maris Otter pale malt extract syrup for Maris Otter and Golden Promise malts. Steep remaining malts at 160° F (71° C) for 30 minutes in 5 qt. (4.7 L) water. Rinse, remove grains, dissolve extract and caramelized sugar completely, top off to desired boil volume, and proceed as above.

**RUNNERS-UP**

**Silver Medal:** Mark Boelman, Loveland, Colo., Weiz Guys, Other Historical Beer

**Bronze Medal:** Mike Ultee, Hillsborough, N.J., PALE ALES (Princeton and Local Environs Ale and Lager Enthusiast Society), Alternative Grain Beer

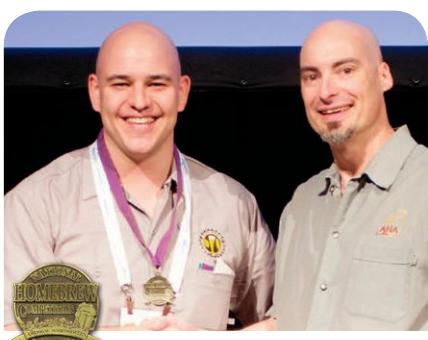
## Category 29

**TRADITIONAL MEAD**

67 entries

**Sponsored by:**

The Compleat Meadmaker

**Dennis Mitchell****Chandler, Ariz.**

Arizona Society of Homebrewers

"Champagne De Guimauve"

35B Semi-Sweet Mead – Pétillant, Medium Standard Mead with Meadowfoam Honey

**Batch Volume:** 5 US gallons (18.9 L)**Original Gravity:** 1.084 (20.3° P)**Final Gravity:** 1.025 (6.3° P)**Color:** 3 SRM**Alcohol:** 11% by volume**FERMENTABLES**

- 12 lb.** (5.44 kg) meadowfoam honey Honey to back sweeten

**WATER**

Bottled spring water

**ADDITIONAL INGREDIENTS**

- 1 Tbsp.** Bentonite
- Fermaid-O
- Potassium metabisulfate
- Potassium sorbate
- Sparkolloid (if needed)

**YEAST**

- 20 g** DV10

**BREWING NOTES**

Rehydrate yeast in 90° F (32° C) bottled spring water with GoFerm. Slowly heat honey container in warm water bath to assist with getting honey out of container



## 2018 NATIONAL HOMEBREW COMPETITION

and mixing must. Vigorously mix honey with water to achieve a 5 gal. (18.9 L) starting volume. Oxygenate must, mix in bentonite, and pitch yeast.

Ferment at 60° F (16° C). Use tailored organic staggered nutrient addition (TOSNA) calculator to determine appropriate Fermaid-O addition. De-gas, and then add Fermaid-O daily for four days, starting one day after pitch.

After fermentation, rack and stabilize mead with potassium metabisulfite and potassium sorbate. After 24–48 hours, back sweeten with amount of honey to achieve desired sweetness level. Rack clear mead into keg and carbonate to desired level; if mead does not clear after back sweetening, add additional clarifier such as sparkolloid.

### RUNNERS-UP

**Silver Medal:** Jeffrey Koehler, Pasadena, Calif., Yeastside Brewers, Traditional Mead

**Bronze Medal:** Nathan Steigman, Saint Paul, Minn., Minnesota Home Brewers Association, Traditional Mead



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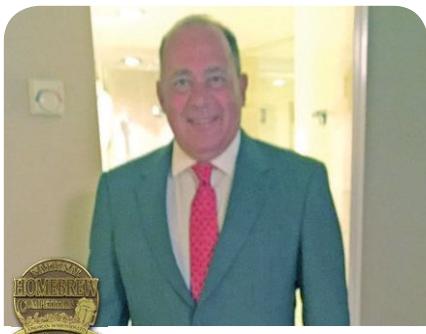
## Category 30

**FRUIT MEAD**

138 entries

**Sponsored by:**

Amoretti



**Scott Behrens**  
Vero Beach, Fla.

"Cherry"

36D Stone Fruit Mead

Still, Sweet, Standard Sack Mead with  
Wildflower Honey, Montmorency and Black  
Marasca Cherries and Hungarian Oak

**Batch Volume:** 12 US gallons (45.4 L)**Original Gravity:** 1.158 (35.8° P)**Final Gravity:** 1.046 (11.5° P)**Alcohol:** 14.7% by volume**ADDITIONAL INGREDIENTS**

Fermaid K

DAP

**YEAST**

36 g RC212

**BREWING NOTES**

Ferment at 62° F (17° C).

**RUNNERS-UP**

**Silver Medal:** Kevin Meintsma, Wayzata, Minn., Primary Fermenters Brewers & Vintners, Fruit Mead

**Bronze Medal:** Jeremy Olsen, Minneapolis, Minn., Saint Paul Homebrewers Club, Fruit Mead

**FERMENTABLES**

- 15 lb.** (6.8 kg) Florida orange blossom honey
- 12 lb.** (5.44 kg) Luxardo cherries in syrup
- 12 lb.** (5.44 kg) Montmorency cherries (dried)
- 6 lb.** (2.72 kg) fresh sliced strawberries
- 3 lb.** (1.36 kg) Flying Bee Ranch buckwheat honey
- 1 lb.** (454 g) Amarena Toschi cherries in syrup

**WATER**

Reverse osmosis water to 12 gal. (45.4 L)  
volume

## Category 31

**SPICE & SPECIALTY MEAD**

136 entries

**Sponsored by:**

Craft Beer &amp; Brewing Magazine



**Michael Wilcox**  
Wichita, Kan.

Kansas City Bier Meisters  
AHA 2018 Mead Maker of the Year

"Ode to Jadwiga"

38B Historical Mead

**Batch Volume:** 2 US gallons (7.6 L)**Original Gravity:** 1.212 (17.3° P)**Final Gravity:** 1.090 (21.5° P)**Alcohol:** 16% by volume**BREWING NOTES**

The original gravity is for the total amount of honey used, but it is not added all at once. Wilcox suggests starting with a 1:2 ratio of honey to water and adding the rest during or after fermentation. See Meadmaker of the Year information on page 65 for detailed brewing notes on this mead.

**RUNNERS-UP**

**Silver Medal:** Daniel Cowan, Glen Burnie, Md., with Michele Cowan, Spice, Herb, Vegetable Mead

**Bronze Medal:** Susan Verberg, Ithaca, N.Y., Ithaca Practitioners of Alemaking, Historical Mead

**FERMENTABLES**

- 1 gal.** (3.79 L) honey (70% acacia, 15% local wildflower and 15% Western buckwheat)
- 1 gal.** (3.79 L) raspberry juice

**YEAST****0.56 oz.** (16 g) Uvaferm 43 dry yeast**ADDITIONAL INGREDIENTS**

A small amount of water for yeast rehydration

Staggered nutrient additions of Fermaid O  
Oak



## 2018 NATIONAL HOMEBREW COMPETITION

Category 32

### STANDARD CIDER & PERRY

89 entries

**Sponsored by:**

Vermont Hard Cider Company



**Matthew Del Fiacco**  
**Algonquin, Ill.**

The Bru Club

"Windfall"

39A New World Cider – Pétillant, Semi-Dry, Naturally Fermented Cider with Gala and Pink Lady

**Batch Volume:** 5 US gallons (18.9 L)  
**Original Gravity:** 1.046 (11.5° P)  
**Final Gravity:** 1.002 (0.5° P)  
**Color:** 3.5 SRM  
**Alcohol:** 5.8% by volume

#### FERMENTABLES

- 5 gal.** (18.9 L) Heirloom Juice Blend: Gala, Wild, and Pink Lady Apples  
**0.5 gal.** (1.9 L) Heirloom Juice Blend to be frozen and stored for future blending

#### ADDITIONAL INGREDIENTS

- 1 tsp.** (5 g) Fermaid K added at the beginning of fermentation  
**2.5 tsp.** (12.5 g) pectic enzyme added at the beginning of fermentation

#### BREWING NOTES

Clean all equipment and apples thoroughly before pressing and press directly into the sanitized primary fermentation vessel. Save 1/2 gal. (1.89 L) of juice and freeze it to use for blending to your desired sweetness level after the secondary maturation time. Pull 1 cup (237 mL) of juice, and dissolve both the Fermaid K and pectic enzyme in it before adding the solution back into the fermenter.

Natural fermentation should take off after a couple of days, after which allow the cider to continue fermenting in the primary vessel for 2 months at 62° F (17° C). After two months, rack the cider into a secondary vessel. Purge the secondary vessel of oxygen before racking; a keg will work well for this purpose. Allow the cider to mature for an additional 5 months at 66° F (19° C)

After the additional maturation time and carbonation, the resulting cider will be quite dry. Use a small syringe and the previously frozen apple juice to back sweeten to taste in sample glasses. This cider is semi-dry and uses roughly 11.5 oz. (340 mL) of fermented cider to 0.5 oz. (15 mL) of juice. Blend at packaging to your chosen ratio by adding the juice to a sanitized bottle, then filling the remaining volume with cider using a counter-pressure bottle filler.

Force carbonate with CO<sub>2</sub> to 1.8 vol. (3.6 g/L), which is pétillant. When all the bottles have been capped, heat pasteurize by heating a kettle of water to 180° F (82° C) and gently placing bottles in the kettle, making sure the water line is at or just below the fill level of the bottles. Turn off the heat, and let the bottles sit for 10 minutes before removing them and letting them return to room temperature. Repeat this process until all bottles are pasteurized, and then store in a cool location.

#### RUNNERS-UP

**Silver Medal:** Anmarie Johnson, Seattle, Wash., North Seattle Homebrew Club, New World Cider

**Bronze Medal:** James Werner, New Berlin, Wis., Beer Barons of Milwaukee, New World Cider

Category 33

### SPECIALTY CIDER & PERRY

129 entries

**Sponsored by:**

Vermont Hard Cider Company



**Nathan Williams**

**Somerville, Mass.**

Boston Wort Processors

AHA 2018 Cider Maker of the Year

"2016 Ice Cider"

40D Ice Cider – Still, Sweet Ice Cider with Dessert Apples

**Batch Volume:** 3 US gallons (11.4 L)  
**Original Gravity:** 1.130 (30.3° P)  
**Final Gravity:** 1.055 (13.5° P)  
**Alcohol:** 10% by volume

#### FERMENTABLES

- 10 gal.** (37.9 L) fresh sweet cider  
@ 13° P (1.052 SG)

#### YEAST

Labs WLP720 Sweet Mead/Wine yeast

#### BREWING NOTES

Employ a two-stage cryo-concentration to prepare fresh sweet cider for fermentation. Freeze juice at 22° F (-5.6° C) in two 5 gal.

bottling buckets. Remove from freezer and drain through the bottling spigot until 4.5 gal. (17 L) total liquid is collected at 1.105 SG. Then re-freeze the 4.5 gal. of liquid at 22° F (-5.6° C) in the bottling bucket. Remove from freezer and drain through bottling spigot to collect 3 gal. (11.4 L) total liquid at 1.130 SG.

Ferment at 64° F (18° C). WLP720 typically stops by itself before drying out at this strength/nutrient concentration. Store on lees for six months.

#### RUNNERS-UP

**Silver Medal:** Thomas Scholey, San Diego, Calif., Cider with Other Fruit

**Bronze Medal:** Jeremy Olsen, Minneapolis, Minn., Saint Paul Homebrewers Club, New England Cider

# SEEK THE SEAL



*Look for This Seal to Identify Beers  
from America's Small & Independent  
Craft Brewers.*

#IndependentBeer



## KUDOS—BEST OF SHOW

### AHA/BJCP Sanctioned Competition Program

#### April 2018

Grafton Brewing Competition, 59 entries—Michael Watson, Invergowrie, Australia.  
WBC Smash, 11 entries—Pete Norris.  
El Paso Home Brewing Competition, 25 entries—Sergio Lomeli, El Paso, TX.  
Microfest/Lift for Life Gym Homebrew Competition, 263 entries—Gary Black, Arnold, MO.  
Hammerdown Brewcup 2018, 327 entries—Brady Smith, Indianapolis, IN.  
Nebraska Shootout, 94 entries—Steven Thedens, Omaha, NE.  
Green Bay Rackers Titletown Open, 147 entries—Laurel Verhagen, Marshfield, WI.  
I Copa de Cerveceros Caseros del Peru, 106 entries—Jenita Dsousa, Lima, Peru.  
Colonial Cup, 312 entries—Edward Marquardt, Ladson, SC.  
V Concurso Sul Brasileiro de Cervejas Caseiras, 500 entries—Daniel Ferreira de Cordova, Florianopolis, Brazil.  
Open Season at the Zoo 2018, 77 entries—Jeremy Kneeland, Lee's Summit, MO.  
TippyBrew 2018, 79 entries—Bradley Hopkins, Indianapolis, IN.  
2018 Maltose Falcons Mayfaire Competition, 480 entries—Israel Arrieta, Azusa, CA.  
22nd Annual Chico Homebrew Competition, 240 entries—Virg Redman, Vacaville, CA.  
BASH American Original Beers, 20 entries—Larry Sommers, Corpus Christi, TX.

#### May 2018

THOTCON Hacker Brew, 17 entries—Steve Mankowski, Chicago, IL.  
2018 Greg Noonan Memorial Homebrew Competition, 188 entries—Tiago Dantas.  
Tamassee Craft Brew Festival, 27 entries—Dillon Payton, West Union, SC.  
Primer Concurso Anual Somos Cerveceros 2018, 214 entries—Roberto J Lentini, Buenos Aires, Argentina.  
Campeonato Chilebruers 2018, Primera Etapa, 35 entries—Nicolas Santana, Santiago, Chile.  
Morgan Cup, 108 entries—Dave Theodore, Milpitas, CA.  
Wales & West Festival, 1003 entries—Kevin Martin.  
3º Concurso CCBR de Cervejas Caseiras, 47 entries—Marcelo Saraiva, Rio de Janeiro, Brazil.  
VI Concurso Interno CCCUY, 115 entries—Matthieu Chambert, Montevideo, Uruguay.  
HOWL Annual Club Competition 2018, 9 entries—Luis Cuellar, Ashburn, VA.

RAZE Second Annual Cinco de Mayo, 67 entries—Matthew Schulz, La Crosse, WI.

Battle of the Bubbles VIII, 167 entries—Lee Kexel, Cockeysville, MD.

Iº Concurso Aberto Concervap, 62 entries—Jonas Geiss, São José dos Campos, Brazil.

Fraser Coast Home Brew Comp, 163 entries—Adrian Lambeth, Queensland, Australia.

Lagerpalooza 4, 175 entries—Curt McCuistion, Ogden, UT.

San Diego County Fair Homebrew Competition, 675 entries—Tom Atkinson, San Diego, CA.

GTA Brews Spring Showdown 2018, 85 entries—Steve Bryson, Toronto, ON.

2018 Alameda County Fair Homebrew Competition (BABO), 177 entries—Robbie Proctor, Pleasant Hill, CA.

Pale Lagers and Hybrid Beers, 11 entries—Aaron Roeschley, Tucson, AZ.

Copa Nacional de Cerveceros Caseros, 26 entries—Anny Cardona.

Wort Transformation Challenge, 180 entries—Adam Gregro, Omaha, NE.

22nd Annual BEER Brew-Off, 200 entries—Josh Youngman, Poughkeepsie, NY.

21st Annual Cactus Challenge, 303 entries—Matthew Herrold, Katy, TX.

Krausen Cup, 230 entries—Len Hallock, Longview, WA.

UNYHA 40th Annual Home Brew Competition, 274 entries—Ken Demarree, Buffalo, NY.

Korean Homebrewer Competition 2018 (KHC 2018), 103 entries—Jared Hatch, Daegu South Korea.  
Wisconsin State Fair, 173 entries—Benjamin Pitsch, West Allis, WI.

Once Bitter Twice Shy, 6 entries—Bob Kapusinski, Austin, TX.

West Sixth Brewoff, 40 entries—Adam Stitzer, KY.

Oregon Homebrew Festival (OHF), 276 entries—Jake Freshour, Portland, OR.

BrewMaui Annual Home Brew Contest, 62 entries—Scott Mize, Petaluma, CA.

Homebruin VIII, 64 entries—John Bolt, Kingston, TN.

Bloat Open, 75 entries—James Czar, Cincinnati, OH.

Heart of Cascadia, 61 entries—Adam Lund, Portland OR.

Upland Brewing Co UpCup, 52 entries—Taylor Brummett, Newburgh, IN.

We Are Not Bitter About Brexit, 49 entries—Adam Clarke, Kilkenny, Ireland.

2018 Beer Revolution Homebrew Cup, 25 entries—Kun Chan Sun, Tainan City, Taiwan.

Rhinegeist Homie Competition, 87 entries—Tim McKee, Cincinnati, OH.

Lunar Rendezbrew, 443 entries—Kevin Foster.

King of the Mountain, 169 entries—Richard Romanko, East Pittsburgh, PA.

Ballast Point & Home Brew Mart Pro Am Home Brew Competition, 31 entries—Witt Mathot, San Diego, CA.

NJHOPZ Das Boot - Maifest, 295 entries—Eric Wembacher, Plainsboro, NJ.

6th Annual Hop Blossom Homebrew Competition, 151 entries—Grant Shaddix, Star Tannery, VA.

Innovation Brew Works Home Brew Competition, 46 entries—Bjorn Erik Enki Gjesdal, Pasadena, CA.

London And South East Craft Brewing Competition, 455 entries—Reg Johns.

Duane Graf Memorial Homebrew Competition, 14 entries—Jake Freshour & Doron Richartz, Portland, OR.

Mead Free or Die - Home, 146 entries—Steve Patik.

Waconia Brewing Pro-Am Competition, 18 entries—Sam Wells, St. Paul, MN.

2nd Annual Lost Cabin Homebrew Comp!, 69 entries—Gary Black, Arnold, MO.

Sotto 50, 84 entries—Nicola Corbo, Bergamo, Italy.  
Great Alaskan Craft Beer and Home Brew Festival, 82 entries—Dan Lasco & Geno Ferrarini, Anchorage, AK.

MoM Hot Summer Brew Off, 384 entries—Eric Martin, Kansas City, MO.

Hogtoberfest Craft Beer Festival & Homebrew Competition, 76 entries—Brian Swords, Cambridge, OH.

3ª Copa Cervezas de Chile, 59 entries—Andrés Salum Czyrek, Santiago, Chile.

Copa Cervejeira Concreva - Regional Maringá, 58 entries—Glaucio Pozza, Londrina, Brazil.

Barnstormer Brewing and Distilling 2018

Homebrew Pro-Am Competition, 128 entries—Mike Vandervoort, Toronto, ON.

Big Batch Brew Bash (BBBB), 112 entries—Dean Weaver, James Smith, Steven Barsalou & Wayne Yandell, Dallas, TX.

Paws for Rhythm and Brews Homebrew Competition, 35 entries—Nancy Roland, CA.

QUAFF COC - Belgian Ales, 30 entries—Brian Trout, San Diego, CA.

I Mistrzostwa Polski Piwowarów Domowych / I Polish Championship of Homebrewers, 389 entries—Adam Necel, Włodysławowo, Poland.

XIII Concurso Nacional das ACervAs, 521 entries—Lucas Furtado, Imbituba, Brazil.



## KUDOS—BEST OF SHOW

### AHA/BJCP Sanctioned Competition Program

#### June 2018

Primer Concurso del Oeste, 52 entries—Marcelo Roldan, Buenos Aires, Argentina.

JABfest 2018, 33 entries—Paul Heibing, Jonesboro, AR.

IV Concurso de Cervezas Caseras de Granada, 58 entries—Ignacio Blázquez Alcover, Toledo, Spain.

Ohio State Fair Homebrew Competition, 539 entries—Craig Davis, Columbus, OH.

OC Mashups & Barley Forge Homebrew Competition, 23 entries—Aaron Viera, Costa Mesa, CA.

2018 Southern Taiwan Homebrew Competition, 50 entries—Chunwei Ho.

OC Fair Homebrew Competition, 366 entries—Michael Newberg, Mission Viejo, CA.

HKHA 6th Annual Homebrew Competition, 84 entries—Alex Wong, Hong Kong, China.

Red Earth Brewers Spring Brew Off, 76 entries—Charlie Sheldon, Blanchard, OK.

Aurora Brewing Challenge, 647 entries—Cory Day, Vancouver, BC.

Sonoma-Marin Fair Home Brew Contest, 15 entries—Kevin McMahon, Novato, CA.

VII Hrvatsko Homebrew Prvenstvo, 432 entries—Domen Srebot, Col, Slovenia.

Joe Spangler Memorial Homebrew Competition, 8 entries—Jimmy Doyle, Las Vegas, NV.

MCM Homebrewer of the Year Q2, 4 entries—Mike Neville.

La Copa del Procer, 34 entries—Fabio Samudio, Panama City, Panama.

Orleans Homebrew Competition, 123 entries—Ryan Perry, Ottawa, ON.

Antelope Valley Homebrew Competition, 66 entries—Bjørn Erik Enki Gjesdal, Pasadena, CA.

Brew Your Calling - Wort with Friends, 102 entries—Doug Chritton, Kansas City, MO.

Summer Sizzler, 208 entries—David Byer, Hot Springs, NC.

The 9th Annual Appalachian Brew Club IPA Throwdown, 64 entries—Rick Newsom, Elkins, WV.

Philly Homebrew Cup, 143 entries—Scott Ficarra.

Bluegrass Cup, 279 entries—Ben Hoh, Lexington, KY.

SuruBeer Cup 2018, 56 entries—Carlos Palacios, Entre Ríos, Argentina.

WBC Scotch Ale, 9 entries—Dunc Blair, Auckland, New Zealand.

The Boneyard Brewoff, 139 entries—Dean Wiensch, Valders, WI.

Dekegger Home Brew Competition, 18 entries—Paul Moore, Ossian, IN.

Slyboro Spring Cider Open, 24 entries—Steven Hyde, Camillus NY.

KGB vs. CRAFT - Celebrity Deathmash, 47 entries—Duke Turner, Warren, MI.

Marin County Fair Amateur Homebrewing Competition, 152 entries—Jordan Germyn, Petaluma, CA.

IPAFest Bogota, 44 entries—Carlos, Medellin, Colombia.

WCB Iron Brewer - Rye, 29 entries—Robert Sutton, Perth, Australia.

Belgian Brew Brawl, 42 entries—Tim Jung.

Haven Club Home Brew Fest, 11 entries—Eric Smith, St. Louis, MO.

River's Edge Homebrew Competition, 22 entries—Aaron Marburg, Sterling Heights MI.

KLOB IPA Competition, 16 entries—Michael Wolfe, Kalamazoo, MI.

Chesty Puller Brew Off, 48 entries—Anthony Tarescavage, Parma, OH.

2018 Hilo Home Brew Competition, 42 entries—Bill Brooks, Honolulu, HI.

Grodzisk Homebrew Competition, 57 entries—Maciej Palusiński & Joanna Mitek, Lublin, Poland.

SBL COC Sub-60, 10 entries—Scott Burns, Savannah, GA.

Lone Tree Brewing Pro-Am, 21 entries—Dax Rush, Highlands Ranch, CO.

Alamo City Cerveza Fest, 397 entries—Kevin Foster, Houston, TX.

NCB Hop Star Competition, 33 entries—Rafal Plesniak, Longford, Ireland.

New Itaewon Experimental Brewers - First Competition, 9 entries—Hyung Tak Suh, Seoul, South Korea.

Copa Cervezas del Ecuador, 80 entries—Carlos Fierro, Quito, Ecuador.

4º Concurso de Cerveja Artesanal do Distrito Federal, 52 entries—Sindomar Afonso Pinto(Dodô), Brasília, Brazil.

#### July 2018

Mid-State Fair, 95 entries—Jeff Lampman, Morro Bay, CA.

BABB's Annual Club Competition, 77 entries—David Nielsen, Brisbane, Australia.

El Paso County Fair, 53 entries—John Landreman, Colorado Springs, CO.

Red River Valley Fair, 28 entries—Mike & Ashley De La Vina, New Orleans, LA.

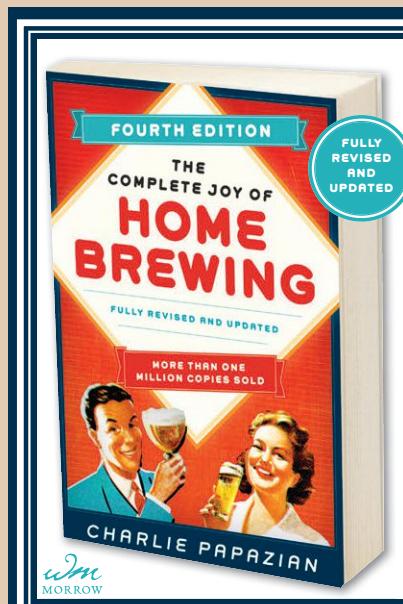
IHCBC June Inter-Club Homebrew Comp, 30 entries—Ryan Braswell, Patchogue, NY.

E.T. Barnette Homebrew Competition, 40 entries—Mike Cragen, Anchorage, AK.

Hogtown Summer 2018 Intraclub Competition, 16 entries—Bill Edwards, Eustis, FL.

Pinolere Garifest, 29 entries—Javier Munilla, Las Palmas, Gran Canaria, Spain.

Spirits of Baker County, 11 entries—Dan Strawn, Ontario, OR.



#### THE HOMEBREWER'S BIBLE:

The essential guide to making a full range of beer styles, including lagers, stouts, pilsners, dubbels, tripels, and specialty beers!

#### ALSO AVAILABLE!



FOR THE ADVANCED BREWER



ON THE ROAD WITH CHARLIE

**AHA/BJCP SANCTIONED  
COMPETITION PROGRAM CALENDAR**

For complete calendar, competition and judging information go to  
[HomebrewersAssociation.org/pages/competitions](http://HomebrewersAssociation.org/pages/competitions)



**September 1, 2018**

**State Amateur Brewers Show**

**of South Australia**

sabsosa.com

Adelaide, Australia

Entry Deadline: 8/24/2018

**September 1, 2018**

**Campeonato Chileberuers 2da etapa**

chilebruers.cl/campeonato-chilebruers-2018

Santiago, Chile

Entry Deadline: 8/18/2018

**September 1, 2018**

**Itaewon Homebrewers Competition No. 2**

facebook.com/ThisLifeFaildBrewery

Seoul, South Korea

Entry Deadline: 8/29/2018

**September 5, 2018**

**Western Australia State Amateur Brewers  
Competition**

competition.wasabc.org

Bibra Lake, Australia

Entry Deadline: 8/31/2018

**September 6, 2018**

**Dogg Dayzz Homebrew Competition**

zzhops.com/competition

Lee's Summit, MO

Entry Deadline: 8/14/2018

**September 8, 2018**

**2nd Annual Conifer Chamber of  
Commerce Oktobeerfest Homebrew  
Competition**

goconifer.com/octoberfest

Conifer, CO

Entry Deadline 9/6/2018

**September 8, 2018**

**O'Zapft Is!**

ozapfthomebrew.com

Haltom City, TX

Entry Deadline: 8/31/2018

**September 8, 2018**

**Delco Fest**

delcowooderworks.com

Aston, PA

Entry Deadline: 8/25/2018

**September 8, 2018**

**Santa Cruz County Fair Homebrew  
Competition**

Watsonville, CA

Entry Deadline: 8/18/2018

**September 8, 2018**

**Fugetaboutit**

fugetaboutit.barleymob.com

Chattanooga, TN

Entry Deadline: 8/24/2018

**September 8, 2018**

**The Manhattan Homebrew Cup**

draught55.com/events

New York, NY

Entry Deadline: 8/24/2018

**September 8, 2018**

**Lager, Lager Everywhere, But Not an Ale  
to Drink**

beerrenegades.com/competitions

Snohomish, WA

Entry Deadline 9/7/2018

**September 8, 2018**

**ACT Amateur Brewing Championship 2018**

canberrabrewers.com.au

Canberra, Australia

Entry Deadline 9/1/2018

**September 8, 2018**

**Good Time Brewers Classic**

Lake Charles, LA

Entry Deadline: 8/31/2018

**September 8, 2018**

**6th Annual Picnique Belgique**

graintoglass.biz/competition

North Kansas City, MO

Entry Deadline 9/2/2018

**September 8, 2018**

**Forever Grateful**

oakroadbrewery.com

Summerville, SC

Entry Deadline 9/2/2018

**September 8, 2018**

**Byggvir's Big Beer Cup**

rennfestbeercup.com

Shakopee, MN

Entry Deadline: 8/24/2018

**September 8, 2018**

**Primer Concurso Survceros**

somoscerveceros.com

Bernal, Argentina

Entry Deadline 9/4/2018

**September 9, 2018**

**Mevashlim 2018**

mevashlim.b7homebrewclub.org

Beer-Sheva, Israel

Entry Deadline 9/8/2018

**September 9, 2018**

**Tulare County Fair**

tcfair.org/competitions\_contests.php

Tulare, CA

Entry Deadline 9/8/2018

**September 9, 2018**

**The Great Frederick Fair Homebrew  
Competition**

thegreatfrederickfair.com/participate

Frederick, MD

Entry Deadline 9/8/2018

**September 10, 2018**

**Carboys SMASH! Pro-Am**

texascarboys.org

Cedar Park, TX

Entry Deadline 9/7/2018

**September 14, 2018**

**Oklahoma State Fair Home Brew  
Competition 2018**

okstatefair.com

Oklahoma City, OK

Entry Deadline: 8/31/2018



For an up-to-date calendar  
of AHA and BJCP events  
go to the Events section of  
[HomebrewersAssociation.org](http://HomebrewersAssociation.org)



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**September 15, 2018**

**Tulsa State Fair Homebrew Competition**

tulsastatefair.com

Tulsa, OK

Entry Deadline 9/7/2018

**September 15, 2018**

**Master Cup Home Brew Tournament of  
China #5 Changsha**

Beijing, China

Entry Deadline 9/8/2018

**September 15, 2018**

**IV Copa CervaSerra de Cervejas**

concurso.cervaserra.com.br

Caxias do Sul, Brazil

Entry Deadline 9/7/2018

**September 15, 2018**

**Commander SAAZ**

saaz.org

Cape Canaveral, FL

Entry Deadline: 8/23/2018

**September 15, 2018**

**V Concurso Estadual Cervejeiro Caseiro**

**ACERVA-ES 2018**

Vitória, Brazil

Entry Deadline: 8/20/2018

**September 15, 2018**

**Old Forge BIG Beer and Odd Ale  
Competition**

kencarman.wixsite.com/ofbb16

Old Forge, NY

Entry Deadline 9/13/2018

**September 15, 2018**

**11th Annual Liquid Poets Poetry Slam**

slam.liquidpoets.com

Fort Collins, CO

Entry Deadline 9/7/2018

**September 15, 2018**

**Bruce Street Brewfest**

form.jotform.com/70795981520161

Sevierville, TN

Entry Deadline 9/1/2018

**September 16, 2018**

**Nez Perce County Fair**

npcfair.org

Clarkston, WA

Entry Deadline 9/15/2018

**September 21, 2018**

**The 6th Annual Members of Barleyment  
(MoB) and Beau's Oktoberfest Homebrew  
Competition**

Ottawa, ON

Entry Deadline: 8/20/2018

**September 22, 2018**

**VicBrew - Victorian Amateur Brewing  
Championship**

vicbrew.org

Melbourne, Australia

Entry Deadline 9/1/2018

**September 22, 2018**

**Australian National Amateur Wine &  
Beer Show**

anawbs.org.au

Adelaide, Australia

Entry Deadline 9/18/2018

**September 22, 2018**

**Welsh National Homebrew Competition**

homebrewcompetition.wales

Newport, Wales

**September 22, 2018**

**Blue Ridge Brew Off**

blueridgebrewoff.com

Asheville, NC

Entry Deadline 9/14/2018

**September 22, 2018**

**Roberts Cove Germanfest Home Brew  
Comp 2018**

robertscovegermanfest.com

Crowley, LA

Entry Deadline 9/17/2018

**September 22, 2018**

**Oaktoberfest Homebrew Competition**

oaktoberfest.bottletaps.com

Livermore, CA

Entry Deadline: 8/25/2018

**September 22, 2018**

**Hillsdale County Fair Beer Show**

Hillsdale, MI

Entry Deadline: 8/31/2018

**September 22, 2018**

**NOLA on Tap 2018 Homebrewer's  
Competition**

nolaontap.org

New Orleans, LA

Entry Deadline: 8/22/2018

**September 22, 2018**

**4o Concurso CCBR de Cervejas Caseiras**

Rio de Janeiro, Brazil

Entry Deadline: 8/31/2018

**September 22, 2018**

**Big Fresno Fair Homebrew Competition**

Fresno, CA

Entry Deadline 9/16/2018

**September 23, 2018**

**Athens Homebrew Classic**

homebrewclassic.com

Athens, GA

Entry Deadline 9/12/2018

**September 23, 2018**

**Crystal Lederhosen**

crystallhc.com

Scranton, PA

Entry Deadline 9/7/2018

**September 29, 2018**

**Orpheus Meadfest**

orpheuspcc.org/orpheus-meadfest.html

Denver, CO

Entry Deadline: 8/26/2018

**September 29, 2018**

**Smithville Wingfest & Home Brew Beer  
Competition**

smithvillewingfest.com

Smithville, TX

Entry Deadline 9/9/2018

**AHA/BJCP SANCTIONED  
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**September 29, 2018**

**Big Muddy Monster Brew Fest Home Brew  
Competition**

Murphysboro, IL

Entry Deadline 9/15/2018

**September 29, 2018**

**Rocktober Fest**

cfahomebrew.org

Redmond, OR

Entry Deadline 9/15/2018

**September 29, 2018**

**Salt City Brew Club Annual Competition  
2018**

comp.saltcitybrew.org

Syracuse, NY

Entry Deadline 9/14/2018

**September 29, 2018**

**New South Brew Off**

clarksvillecarboys.com/NSBO

Clarksville, TN

Entry Deadline: 8/31/2018

**September 29, 2018**

**Fresh Hop Ale Festival**

freshhopalefestival.com

Yakima, WA

Entry Deadline 9/27/2018

**September 29, 2018**

**Maryland Microbrewery Festival  
Homebrew Competition**

mdmicrobrewfest.brewcompetition.com

Westminster, MD

Entry Deadline 9/15/2018

**September 29, 2018**

**2018 Pacific Brewers Cup**

Manhattan Beach, CA

Entry Deadline 9/14/2018

**September 30, 2018**

**Dubim Yourself - Biratenu**

biratenu.com

Jerusalem

Entry Deadline 9/25, 2018

**October 5, 2018**

**Alaskan Homebrew Competition -**

***Autumn Pour***

alaskanbeer.com/homebrew

Juneau, AK

Entry Deadline 9/21/2018

**October 6, 2018**

***Valhalla: The Meadng of Life***

brewdrinkrepeat.com/valhalla

Phoenixville, PA

Entry Deadline 9/22/2018

**October 6, 2018**

***Oktober Fest Santiago 2018***

oktoberfest.com.do

Santiago, Dominican Republic

Entry Deadline: 10/5/2018

**October 6, 2018**

***Brixtoberfest***

brixtoberfest.brixiesbrewers.com

Brookfield, IL

Entry Deadline 9/28/2018

**October 6, 2018**

***Smoke in The Valley***

Seymour, CT

Entry Deadline 9/23/2018

**October 6, 2018**

***Fresh Hop Competition!***

facebook.com/events/394656434365525

Peoria, IL

Entry Deadline: 8/31/2018

**October 7, 2018**

***Anchor Town Invitational Homebrew***

***Competition***

greatnorthernbrewers.org/competitions

Anchorage, AK

Entry Deadline 9/29/2018

**October 8, 2018**

***Copa Cervezas de America***

copacaervezasdeamerica.com

Santiago, Chile

Entry Deadline: 8/10/2018

**October 10, 2018**

***2º Concurso Cervejeiro Caseiro WE Brew***

***Shop***

Porto Alegre, Brazil

Entry Deadline: 8/20/2018

**October 12, 2018**

***II Copa Kylix de Hidromel - Caseiros***

copakylix.com.br

Curitiba, Brazil

Entry Deadline 9/30/2018

**October 13, 2018**

***2018 GEBL Oktoberfest and Homebrew  
Challenge***

gebl.org/articles/2018-gebl-oktoberfest-and-homebrew-challenge

Everett, WA

Entry Deadline: 10/6/2018

**October 13, 2018**

***The Sower's Cup***

lincolnlagers.com/sowers-cup

Lincoln, NE

**October 13, 2018**

***Lights Out! Dark Beers Only Competition***

Gig Harbor, WA

Entry Deadline: 10/8/2018

**October 13, 2018**

***Capitol Brewers 2018 Harvest Classic***

reggiebeer.com/ReggieEntry.php?CompetitionID=HNCWQ1000362

Salem, OR

Entry Deadline 9/21/2018

**October 13, 2018**

***Michigan Mead Cup***

michiganmeadcup.com

Ferndale, MI

Entry Deadline 9/30/2018

**October 13, 2018**

***Good Beer Homebrew Competition***

goodbeerfestival.com

Salisbury, MD

Entry Deadline 9/14/2018



**AHA/BJCP SANCTIONED  
COMPETITION PROGRAM CALENDAR**

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**October 13, 2018**

**Urimal Beer Competition**

[facebook.com/k.homebrew](http://facebook.com/k.homebrew)

Seoul, South Korea

Entry Deadline: 10/5/2018

**October 20, 2018**

**Oktoberfest in October**

[barleymashers.org](http://barleymashers.org)

Clearwater, FL

Entry Deadline: 10/5/2018

**October 26, 2018**

**Competencia Amateur**

**Cerveza Mexico 2018**

[copacerveza.mx](http://copacerveza.mx)

Mexico City, Mexico

Entry Deadline: 6/22/2018

**October 19, 2018**

**I<sup>a</sup> Copa Cerveja Brasil**

[copacervejabrasil.com.br](http://copacervejabrasil.com.br)

Brasilia, Brazil

Entry Deadline: 10/11/2018

**October 20, 2018**

**SFBC Funks Homebrew Competition**

[shortfingerbrewing.com/pages/funks](http://shortfingerbrewing.com/pages/funks)

Kitchener, ON

Entry Deadline: 10/13/2018

**October 27, 2018**

**GTHof Foamers Brew Bash**

[topekabrewers.com](http://topekabrewers.com)

Topeka, KS

Entry Deadline: 10/21/2018

**October 19, 2018**

**Best Florida Beer**

[bestfloridabeer.org](http://bestfloridabeer.org)

St. Petersburg, FL

Entry Deadline 9/26/2018

**October 20, 2018**

**The Brew Hut Annual Homebrew**

**Competition**

[thebrewhut.brewcompetition.com](http://thebrewhut.brewcompetition.com)

Aurora, CO

**October 27, 2018**

**2018 Salmonid HBC Grim Reaper**

**Challenge**

Salmon, ID

Entry Deadline: 10/20/2018

**October 19, 2018**

**Concurso de Cervejas Uniso**

Sorocaba, Brazil

Entry Deadline: 7/19/2018

**October 20, 2018**

**Beer for Boobs VII**

[beerforboobs.sodz.org](http://beerforboobs.sodz.org)

Columbus, OH

Entry Deadline: 10/6/2018

**October 28, 2018**

**2018 AIChE Beer Brewing Competition (ABBC)**

[aiche.org/community/awards/aiche-beer-brewing-competition](http://aiche.org/community/awards/aiche-beer-brewing-competition)

Pittsburgh, PA

Entry Deadline: 7/27/2018

**October 20, 2018**

**13th Annual New England Regional Homebrew Competition**

[nerhc.brewcomp.com](http://nerhc.brewcomp.com)

Manchester, NH

**October 20, 2018**

**Celebrewtion**

[celebrewtion.com](http://celebrewtion.com)

Sacramento, CA

Entry Deadline: 10/12/2018

**October 28, 2018**

**Southern New England Regional Homebrew Competition**

[undergroundbrewers.org/snerhc](http://undergroundbrewers.org/snerhc)

Stratford, CT

Entry Deadline: 10/13/2018

**October 20, 2018**

**HOPS BOPS 34**

[hopsclub.org](http://hopsclub.org)

Philadelphia, PA

Entry Deadline: 10/14/2018

**October 24, 2018**

**Master Cup Home Brew Tournament of China # 5 Shanghai**

Shanghai, China

Entry Deadline: 10/13/2018

**October 20, 2018**

**NoVA Homebrew Competition Classic**

[comp.gristhomebrew.com](http://comp.gristhomebrew.com)

Arlington, VA

**October 25, 2018**

**Australian Amateur Brewing**

**Championship**

[aabc.org.au](http://aabc.org.au)

Melbourne, Australia

Entry Deadline: 10/8/2018

**October 20, 2018**

**Music City Brew Off**

Nashville, TN

**October 25, 2018**

**Competencia Nacional de Homebrewers**

**Panama 2018**

Panama City, Panama

Entry Deadline: 10/5/2018



For an up-to-date calendar  
of AHA and BJCP events  
go to the Events section of  
[HomebrewersAssociation.org](http://HomebrewersAssociation.org)

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# COMMERCIAL CALIBRATION

**One way beer judges check their palates is by using commercial “calibration beers”—classic versions of the style they represent. Zymurgy has assembled a panel of four judges who have attained the rank of Grand Master in the Beer Judge Certification Program. Each issue, they score two commercial beers (or meads or ciders) using the BJCP scoresheet. We invite you to download your own scoresheets at [bjcp.org](http://bjcp.org), pick up a bottle of each of the beverages and judge along with them in our Commercial Calibration.**



**OUR EXPERT PANEL** includes David Houseman, a Grand Master VI level judge and competition director for the BJCP from Chester Springs, Pa.; Sandy Cockerham, a Grand Master IV level judge from Indianapolis, Ind. and an associate exam director and Midwest Representative for the BJCP; Scott Bickham, a Grand Master III judge from Corning, N.Y., who has been exam director or associate exam director for the BJCP since 1995; and Gordon Strong, a Grand Master IX judge, principal author of the BJCP Style Guidelines, and president of the BJCP board who lives in Beavercreek, Ohio.

**G**lutен-intolerant folks, take heed. This round we decided to dazzle the taste buds of our intrepid judges with cherries, in the form of cherry cider. We determined that the two ciders be judged in the C2B category of the BJCP style guidelines: cider with other fruit, in this case sweet or tart cherries. Two US locales where cherries (and apples) grow best are Oregon and Michigan, so we chose a cherry cider from each state.

Our first offering is from Wandering Aengus Ciderworks in Hood River, Ore. Anthem Cherry is a complex, 5.5% ABV marriage of fruit that tends to vary batch to batch, with Queen Anne, Bing, and Sweetheart cherries from Salem used for one formulation, straight Montmorency tart cherries from Newberg used for another; this particular batch blends Montmorency's tartness and flavor with Bing's earthy, ripe, woody flavors to create a beautiful, complex, semi-dry sparkling cider that begs comparisons to wine.

From Michigan, we chose Star Cut Ciders, a spinoff of Short's Brewing. Squishy is a 7.5% ABV semisweet celebration of Michigan cherries. Lush with ripe Balaton and Montmorency cherries from King Orchards, this vivid beverage packs a huge cherry presence along with late-season apple complexities.

As with wine grapes, cherries and apples vary depending upon their *terroir*. Consequently, there can be numerous ester and phenol complexities that change not only with variety and location, but even batch to batch. Judges must use their expertise to describe these complex byproducts of fruit and fermentation and then determine how appropriately they fit within the allowable parameters of the imposed style category.

We hope you get a chance to try both of these delicious, naturally gluten-free regional showcases of American cherries and apples.



**Wandering Aengus Ciderworks**  
[wanderingaengus.com](http://wanderingaengus.com)

**Starcut Ciders**  
[starcutciders.com](http://starcutciders.com)

**BJCP Style Guidelines**  
[bjcp.org](http://bjcp.org)

**Commercial Calibration Index**  
[HomebrewersAssociation.org/pages/zymurgy/commercial-calibration](http://HomebrewersAssociation.org/pages/zymurgy/commercial-calibration)

# THE SCORES



Anthem Cherry Cider—Wandering Aengus Ciderworks, Hood River, Ore.  
BJCP Category C2B. Cider with Other Fruit (Tart Cherries)

## THE JUDGES' SCORES FOR ANTHEM CHERRY CIDER



DAVE HOUSEMAN



SANDY COCKERHAM



SCOTT BICKHAM



GORDON STRONG

**Aroma:** Both moderate apple and high cherry aromas are distinctive. No off aromas. Very inviting bouquet with just a hint of clean ethanol to finish the aroma. (8/10)

**Appearance:** Bright, light red color. Brilliant clarity. Still. All appropriate. Thin legs and fine bubbles around the glass. Beautiful cider. (6/6)

**Flavor:** Noticeable apple flavor is there, secondary to the bright, tart cherry flavor. The tartness from the cherries adds to the balance from what I perceive as sweeter than semi-dry. The acidity enhances the brightness. Medium body. Still—additional acidity from carbonic of carbonation is not needed. The alcohol is there in the background but not pronounced. The Montmorency cherries add a rich, buttery cherry note reminiscent of cherry pie. (21/24)

**Overall Impression:** This is a well-balanced cider exhibiting both the apple and the added fruit: cherries. Acid-sugar and apple-cherry balances are in harmony. The cherry seems real, not artificial. It would be very easy to drink this entire 22 oz. bottle as if it were a soft drink, but before long you realize it is a 5.5% ABV cider. Excellent for those who like sweeter wines and enjoy cherries, as a cocktail before dinner, or as a dessert cider with accompanying warm cherry pie. (8/10)

**Total Score:** (43/50)

**Aroma:** Up front a light punch of earthiness yields to moderate fruit that is heavy on cherry (sort of a dry wine-like cherry note) and an earthy apple note. No off aromas. No sulfur. No diacetyl. (9/10)

**Appearance:** Deep ruby red, very clear. Fine bubbles stream up, leaving a near-white rim of fine bead at the edge of the glass. (6/6)

**Flavor:** Moderate woody fruit flavor, mostly dry cherry but also maintains some apple character. Apple character is slightly woody and has a slight burst of apple skin. Flavor tastes genuine and fully fermented (I'm not getting raw juice flavor at all). Balance is good, very slight tilt towards the acid, which serves to brighten and to help the fruit pop a bit. Alcohol gives medium to medium-low warmth and integrates well into the flavors. Body is medium to medium-full with light, sparkling carbonation. Aftertaste is dry apple with slight acidity. (21/24)

**Overall Impression:** Delicious and well-crafted cherry cider. Appearance is quite welcoming, the cherry and apple characters are both there, and they meld well together. Cherry hits the high notes and the apple provides the bass. Delicious on its own and highly drinkable. Would also go great with food. (9/10)

**Total Score:** (45/50)

**Aroma:** There is a balanced blend of fresh apples and cherries, with the latter lending both sweetness and sourness. The cherries have some Montmorency character, but there are additional spicy and woody notes that resemble nutmeg and allspice. These do not seem like additions, but rather the result of some degree of natural fermentation. The apple blend provides some honey-like sweetness and acidity along with some light almond notes and a little dessert wine character. The fermentation adds complexity without detracting from the apples and cherries. (9/10)

**Appearance:** The head does not form or last well—has some effervescence but fizzles away rather quickly. The medium-red color and excellent clarity recall a California pinot noir. (5/6)

**Flavor:** The flavor is well balanced, with some base sweetness that provides a tapestry for the complex blend of cherry- and apple-derived flavors. The cherries provide some tartness and earthy tannins, while the apples contribute acidity, notes of freshly pressed cider, and some nutmeg and wood spiciness. The finish is soft, medium-dry with medium acidity and tannins. The medium-low carbonation enhances the refreshing nature. (22/24)

**Overall Impression:** This nice fruit cider showcases a complex blend of apples in the base cider and complementary notes from the cherries and natural fermentation. The base cider is well formulated to provide some sweetness, tannins, and acidity. The cherries are in balance and enhance the bouquet and flavor from the apples. A little more carbonation would further improve the drinkability, but it's quite nice as it is. (9/10)

**Total Score:** (45/50)

**Aroma:** Medium-strong floral apple bouquet. Cherries add a distinctive fruitiness without seeming artificial. The floral aspect to the apple fruitiness is the additional complexity note. Perhaps a very light hint of ethyl acetate noted. (8/10)

**Appearance:** Clear. Deep reddish-pink color. Sparkling pour, large head settles down to a pink froth. (6/6)

**Flavor:** Sparkling. Semi-dry sweetness with balanced acidity. Noticeable apple and cherry, distinct and in good balance with each other. Mild tannin. Fermentation character is complex and rustic. The cherry flavor is also complex but natural tasting. Clean but not simplistic. There is a hint of spicy complexity to the cherry aspect. (21/24)

**Overall Impression:** Often cherry ciders are simplistic and one dimensional. Not this one—it has both apple and cherry but doesn't seem artificial at all. There is a depth and complexity to the flavor that is impressive. The cherries add to the apple character without overwhelming it. A cherry cider for grownups. (9/10)

**Total Score:** (44/50)



## THE JUDGES' SCORES FOR SQUISHY



**Aroma:** Intense buttery aroma, more Orville Redenbacher than cider. The buttery note may be largely due to the strains of cherries used but also perhaps some diacetyl from fermentation. No overt apple aroma. The actual cherry aroma is initially absent but some arises as the cider warms. (7/10)

**Appearance:** Dark red to ruby color. Brilliant clarity. Pétillant carbonation leaves fine bubbles on the glass and thin legs. Very nice-looking cider. (6/6)

**Flavor:** Buttery notes dominate flavor as well. Perhaps largely due to the cherry strains used together. Full bodied. No distinctive apple character, but more cherry notes are distinctive in flavor than aroma. Not as tart to balance sweetness as the Montmorency cherries might promise, but perhaps the Balaton cherries are not as tart and yield the buttery notes. The faintest bit of acetic acid in the aftertaste adds to the overall complexity. There are some grassy oxidation notes in the aftertaste as well. (16/24)

**Overall Impression:** Whatever the source of the buttery character, this was too much and too prominent for a balanced cider. The blend of cherries or the amounts used may be the culprit, but residual diacetyl may also contribute. The cherry blend does add to the overall complexity and body but detracts from the perception of apple character. It also throws off the balance since there isn't sufficient tartness to balance the sweetness and buttery character, leaving a cider that is perceived as sweeter than semi-dry. A nice sipping cider. I'd like to boil this down for a cherry compote to have with vanilla ice cream. (6/10)

**Total Score:** (35/50)

**Aroma:** Initially, the aroma is very much like a medium-sweet red wine, not distinctly cherry or apple, more akin to fermented grape must. There are low floral esters and a very faint trace of acetification. Low sweet notes of alcohol. As it warms up, it begins to emit medium-low cherry aroma, sort of a dry cherry note. The apple seems lost in the vinous character. No diacetyl. Slightly earthy as it warms. (7/10)

**Appearance:** Deep wine red, pours with a pale, pinkish-purple head with low retention. The clarity is good but not bright. Cider leaves a ring of foam at the edge of the glass. (6/6)

**Flavor:** Medium fruitiness with a bit of apple skin and dry-ish cherry. Balance is missing a little acidity, and the cider comes off borderline flabby. I get a light bite of ethyl acetate burn at the back of the throat. The aftertaste is dry and a bit dusty tannic. I'd call this semi-dry rather than semisweet. Flavor is more cider-like than is the aroma. Low sulfite notes. Medium body and lightly sparkling. (16/24)

**Overall Impression:** This is a pleasant cider that seems drier than the packaging states. A little more acidity would help the balance a bit and would serve to brighten the fruit. This one comes off a bit simple and would be good to drink while enjoying the outdoors. (7/10)

**Total Score:** (36/50)

**Aroma:** The initial aroma has some butterscotch dried fruit notes (prunes and dates) that fade and leave behind a moderately low burnt raisin character. There are pleasant apple and fresh cherry notes underneath, but they should be more prominent. The cherry aroma has a semisweet character along with some acidity and light almond and earthy notes. The apples are at an appropriate level for support but are indistinct. (7/10)

**Appearance:** Beautiful burgundy color with a modest, off-white-but-surprisingly-dark head that lasts well. (6/6)

**Flavor:** This cider has nice complexity with balance toward tartness. There are low sherry-like and raisin oxidative notes that correlate with the aroma but are less prominent without the butterscotch character. The base apple cider lends some acidity and sweetness, but the focus is on the cherries, which have some interesting almond notes (perhaps from the pits?) that transition through a bright sourness to a dry finish. There is some sweetness at the end, but it's at a lower level than I would expect from a semisweet cider. There is also a low alcohol warmth that is clean and in harmony. (18/24)

**Overall Impression:** This is a pleasant fruit cider that is well-conditioned with good balance. After the initial burst of prune and other oxidative notes fades, it is quite quaffable, albeit a little drier than semisweet. It is nice to see interesting and flavorful ciders like this emerge into the market. (8/10)

**Total Score:** (39/50)

**Aroma:** Strong cherry aroma, clean and slightly spicy. Mild apple in background. Clean fermentation character—nothing off. Cherry dominates. Light impression of sweetness as sweet fruit. Bare hint of alcohol. (8/10)

**Appearance:** Moderate pink head settles fast. Deep red color. Clear but almost opaque. (6/6)

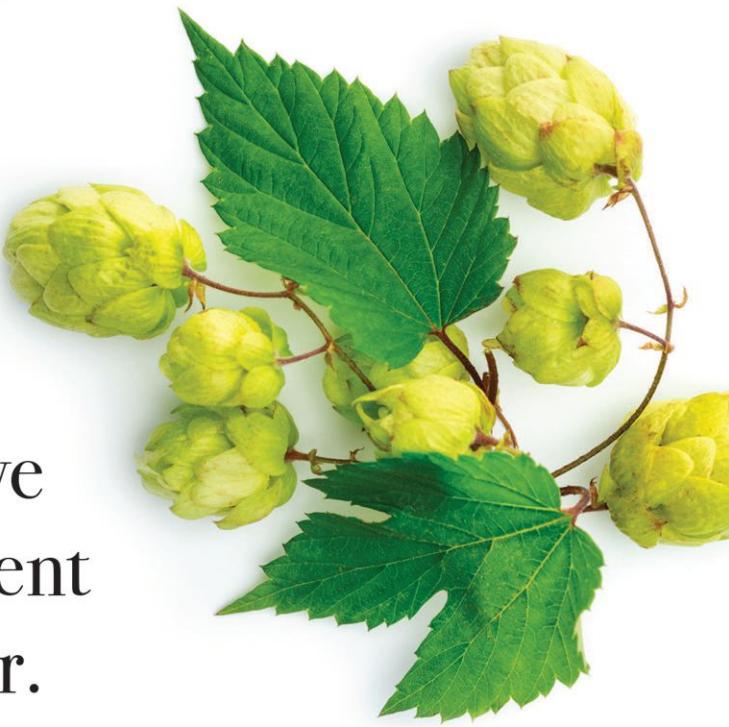
**Flavor:** Sparkling. Sweet cherry flavor initially, balanced acidity for the sweetness, and a moderate finish with some tannin. Clean fermentation. Apple is again in the background behind cherry—the cherry is more evident initially with the apple tannin becoming stronger in the finish and aftertaste. Light warmth of alcohol. Clean aftertaste of cherry and apple. Medium body. (16/24)

**Overall Impression:** A simple drinker. Cherry dominates and seems a bit raw. The apple is on the subtle side. A bit strong and lacking in complexity, but everything is quite clean. More for the alcopop crowd than cider aficionados, but if you like cherries, this has them in spades. (7/10)

**Total Score:** (37/50)



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By Charlie Papazian



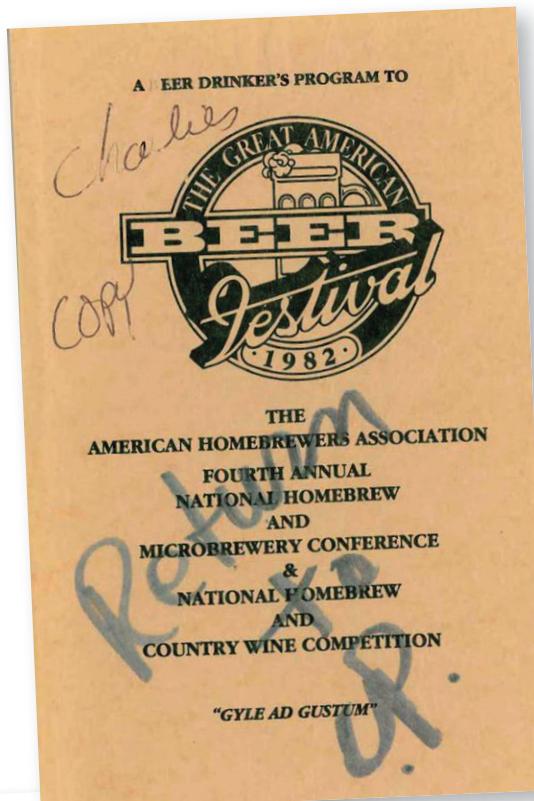
# Flubadub Gansett

After 48 years of brewing, I still enjoy explorations and recreations with homebrewing. I often tell a story about the beers of the first Great American Beer Festival in 1982, which featured 22 breweries pouring 40 beers for 750 attendees. The “microbreweries” that attended that very first year were Boulder Brewing, Sierra Nevada Brewing, River City Brewing, and Anchor Brewing.

The two beers that seem to be the most memorable were brewed by the then Falstaff Brewing Company: Ballantine India Pale Ale and Narragansett Porter. Both were distinguished by brilliant Cascade dry hopping. Both had a perfect foundation of malt character that elevated what I would call “old-school” Cascade hop flavor and aroma.

For those of you who weren't around in those early days of Cascade hop cultivation, the Cascade hop of today is very different in character than the original cultivars we welcomed as Cascade hops in the early 1980s. A bright conflagration of citrus and pine is one way I recall experiencing it. My homegrown hops cultivated from those original cuttings still maintain those old-school characters.

The interesting thing about the Narragansett Porter is that it was once a regional brand of New England. The brewery faltered, and the brand was bought by Falstaff and briefly resurrected for regionally reminiscent beer drinkers. But the version of Narragansett Porter presented at the 1982 Great American Beer Festival was different than the traditional brew of previous brewers and years.



shelf life allowed by the Schmidt brewery. It has an alcohol content of 4.75 percent by volume.

The brewery claims: "Prior Double Dark is among the roundest, smoothest, maltiest medium-bodied dark beers available anywhere."

#### Birrell

This non-alcoholic soft drink is made of birch bark extract, corn sweeteners and water. It has a flavor akin to root beer but more pungent and robust in both flavor and character.

Birch beer is indigenous to eastern Pennsylvania from the shores of the Delaware to the Susquehanna north to the Anthracite region and south to Philadelphia. This delicious, non-alcoholic beverage is on tap in many roadside bars in this area and is especially favored by thirsty, teetotaling Amish and Pennsylvania Dutch folk.

#### Birrell

Birrell is a special type of lager beer brewed like any other alcohol-containing malt beverage. The only difference is that by a process exclusive to the brewers the alcohol is kept below .5 percent by volume.

Birrell is brewed by Christian Schmidt under special license of Hurlmann Brewery in Zurich, Switzerland.

#### 8 Falstaff

1025 Grant Avenue  
Fort Wayne, Indiana 46803

#### *Ballantine India Pale Ale*

IPA uses malted barley, a small amount of corn grits, top fermenting ale yeast, and a blend of Cascade and Bullion hops. It is named after the kegged ale the British sent their troops in India.

This hardy ale had to survive a long trip and hold up to the desires of thirsty soldiers. A 6-month aging period prolongs shelf life. It will last a good long time if handled with care. The brewmaster recommends a 42 degree F. serving temperature. The alcohol content of IPA is between 6 and 7 percent by volume.

The brewery claims: "Ballantine India Pale Ale is a very highly hopped, very bittersweet ale. Very bitter because of the hops, and very sweet because of the caramel barley malt." To quote the

brewmaster: "If you like a good scotch you'll like IPA because it's a good dry drink."

#### *Narragansett Ballantine Porter*

This dark brew uses malted barley, a small amount of corn grits, top fermenting ale yeast, and a blend of Cascade and Bullion hops. Ballantine Porter is dry hopped in storage during transfer from primary to secondary. CO<sub>2</sub> is used to reinvigorate the hops later.

The peak for this brew is around 45 days. The alcohol content of Ballantine Porter is over 6 percent by volume.

The brewery claims: "Ballantine Porter is a special dark, high alcohol content beer with more body and hop flavor to it than most of Falstaff's and most other breweries' products."

9 F. X. Matt Brewing Company  
811 Edward Street  
Utica, New York 13502

#### *Matt's Premium Beer*

This Matt's product is a pilsener-lager using a blend of 2- and 6-row malted barley, rice and corn grits, a bottom fermenting lager yeast and domestic and imported hops including Cascade.

The Premium Lager has three months of shelf life. The alcohol content is 4.5 percent by volume. The recommended serving temperature is 45 degrees F.

The brewery claims: "Matt's Premium Beer has a smooth, rich taste with grain sweetness blended with hop bitterness so that neither they nor any other taste components predominate."

#### *Maximus Super*

This is a high-strength pilsener-lager that uses a blend of 6- and 2-row malted barley, rice, corn grits, bottom fermenting yeast, and a blend of domestic and imported hops.

The shelf life of Maximus is 5 to 6 months. The alcohol content is 6.6 percent by volume. The recommended serving temperature is 45 degrees F.

The brewery claims: "Maximus Super has a rich, full taste, with a slight after-sweetness that comes from the extra alcohol."

# Flubadub (All-Grain)

**Batch Size:** 5.5 US gallons (21 L)

**Original Gravity:** 1.048 (12 B)

**Extract Efficiency:** 76%

**Final Gravity:** 1.012 (3 B)

**Bitterness:** 24 IBU

**Color:** 24 SRM (48 EBC)

**Alcohol:** 5% by volume

## MALTS AND ADJUNCTS

<b>8 lb.</b>	(3.6 kg) Pilsner malt, plus 1 cup (250 mL) for the cereal mash
<b>1 lb.</b>	(454 g) flaked corn
<b>8 oz.</b>	(227 g) aromatic malt
<b>4 oz.</b>	(113 g) black (patent) malt
<b>4 oz.</b>	(113 g) black debittered malt

## HOPS

<b>0.75 oz.</b>	(21 g) German Hallertauer, 4.5% a.a. @ 60 min (3–4 HBU/95 MBU)
<b>2.5 oz.</b>	(70 g) wild hops, 1% a.a. @ 5 min (2–3 HBU/70 MBU)
<b>1 oz.</b>	(28 g) homegrown Cascade, 5% a.a. @ 0 min (5 HBU/140 MBU)
<b>1.25 oz.</b>	(35 g) homegrown hops, blended into a powder, dry hop

## YEAST

German or Bavarian type lager yeast. Yes, lager yeast. I use my own 35-year-old yeast, which is sold by White Labs as WLP862 Cry Havoc.

## ADDITIONAL ITEMS

<b>1/4 tsp.</b>	(1 g) powdered Irish moss
<b>3/4 cup</b>	(175 mL) corn sugar for priming bottles or 0.33 cups (80 mL) for kegging

## BREWING NOTES

A step infusion mash and separate cereal mash are employed to mash the grains. Add 6 qt. (4.3 L) of cold water to 1 cup (250 mL) crushed Pilsner malt and 1 pound (454 g) of flaked corn and bring to a boil. Meanwhile, add 9 qt. (8.6 L) of 140° F (60° C) water to the remaining crushed grain, stir, stabilize, and hold the temperature at 132° F (53° C) for 30 minutes. After half an hour, add the boiling corn and Pilsner malt to the main mash. Add heat if needed to bring mash 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 3.5 gal. (13.5 L) of 170° F (77° C) water. Collect about 5.5 gal. (21 L) of runoff. Add 60-minute hops and bring to a full and vigorous boil.

The total boil time will be 60 minutes. When 10 minutes remain, add the Irish moss. When 5 minutes remain, add the 5-minute hops. After a total wort boil of 60 minutes, turn off the heat, add the 0-minute hops, and place the pot (with cover on) in a running cold-water bath for 30 minutes. Continue to chill in the 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 gal. (21 L) with additional cold water if necessary. Aerate the wort very well.

Pitch the yeast when temperature of wort is about 70° F (21° C). Once visible signs of fermentation are evident, ferment at about 55° F (12.5° C) for about one week or until fermentation shows signs of calm and stopping. Rack from primary to a secondary and add the hop powder for dry hopping. If you have the capability, “lager” the beer at temperatures between 35 and 45° F (1–7° C) for 3–6 weeks.

Prime with sugar and bottle or keg when complete.

**“THE CASCADE HOP OF  
TODAY IS VERY DIFFERENT  
IN CHARACTER THAN THE  
ORIGINAL CULTIVARS WE  
WELCOMED AS CASCADE  
HOPS IN THE EARLY  
1980S.”**

I reviewed the 1982 Great American Beer Festival program (which I still have) and discovered some interesting information about that 1982 beer. The beer that was originally going to be sent and presented at the Great American Beer Festival was something called Ballantine Porter, and that's what they sent us program information for. When the beers arrived, we discovered that the brewery had changed the name to Narragansett Porter and festgoers were the beneficiaries. It was a dark, medium-bodied porter with a balanced, roasted, toasted dark malt flavor. The lightness of corn and a medium malt

body accented the flavor and aroma experience of dry-hopped Cascade perfectly.

## America's First Dry-Hopped Beer

According to the program, which was the information given to us by the brewery, “This dark brew uses malted barley, a small amount of corn grits, top fermenting yeast and a blend of Cascade and Bullion hops. Ballantine [actually presented as Narragansett] Porter is dry hopped in storage during transfer from primary to secondary. CO<sub>2</sub> is used to reinvigorate the hops later. ... The peak for this brew

# Flubadub (Partial-Mash)

**Batch Size:** 5.5 US gallons (21 L)

**Original Gravity:** 1.048 (12 B)

**Extract Efficiency:** 76%

**Final Gravity:** 1.012 (3 B)

**Bitterness:** 24 IBU

**Color:** 24 SRM (48 EBC)

**Alcohol:** 5% by volume

## MALTS AND ADJUNCTS

<b>6 lb.</b>	(2.7 kg) pale malt extract syrup or 5.1 lb. (2.3 kg) dried pale malt extract
<b>12 oz.</b>	(340 g) dextrose/corn sugar
<b>8 oz.</b>	(227 g) aromatic malt
<b>4 oz.</b>	(113 g) black (patent) malt
<b>4 oz.</b>	(113 g) black debittered malt

## HOPS

<b>1 oz.</b>	(28 g) German Hallertauer, 4.5% a.a. @ 60 min (4–5 HBU/126 MBU)
<b>2.5 oz.</b>	(70 g) wild hops, 1% a.a. @ 5 min (2–3 HBU/70 MBU)
<b>1 oz.</b>	(28 g) homegrown Cascade, 5% a.a. @ 0 min (5 HBU/140 MBU)
<b>1.25 oz.</b>	(35 g) homegrown hops, blended into a powder, dry hop

## YEAST

German or Bavarian type lager yeast. Yes, lager yeast. I use my own 35-year-old yeast, which is sold by White Labs as WLP862 Cry Havoc.

## ADDITIONAL ITEMS

<b>1/4 tsp.</b>	(1 g) powdered Irish moss
<b>3/4 cup</b>	(175 mL) corn sugar for priming bottles or 0.33 cups (80 mL) for kegging

## BREWING NOTES

Heat 2 qt. (2 L) water to 172° F (78° C) and then add crushed grains to the water. Stir well to distribute heat. Temperature should stabilize at about 155° F (68° C). Wrap a towel around the pot and set aside for about 45 minutes. Have a homebrew.

After 45 minutes, add heat to the mini-mash and raise the temperature to 167° F (75° C). Then pass the liquid and grains into a strainer and rinse with 170° F (77° C) water. Discard the grains.

Add more water to the sweet extract you have just produced, bringing the volume up to about 2.5 gal. (9.5 L). Add dextrose/corn sugar, malt extract, and 60-minute hops and bring to a boil. The total boil time will be 60 minutes. When 10 minutes remain, add the Irish moss. When 5 minutes remain, add the 5-minute hops. After a total wort boil of 60 minutes, turn off the heat and add the 0-minute hops. Immerse the covered pot of wort in a cold-water bath and let sit for 15–30 minutes or the time it takes to have a couple of homebrews.

Then strain out and sparge hops and direct the hot wort into a sanitized fermenter to which 2.5 gal. (9.5 L) of cold water has been added. If necessary, add additional cold water to achieve a 5.5 gal. (21 L) batch size. Aerate the wort very well.

Pitch the yeast when temperature of wort is about 70° F (21° C). Once visible signs of fermentation are evident, ferment at about 55° F (13° C) for about one week or until fermentation shows signs of calm and stopping. Rack from primary to a secondary and add the hop powder for dry hopping. If you have the capability, “lager” the beer at temperatures between 35 and 45° F (1–7° C) for 3–6 weeks.

Prime with sugar and bottle or keg when complete.

is around 45 days. The alcohol content is over 6% by volume.”

It struck me that this may have been the first modern-day American-brewed beer that was dry hopped. The few existing microbrewers such as Sierra Nevada, Boulder Beer, River City, and Anchor Brewing were more likely late hopping during the brewing stage. I don’t recall that dry hopping in the fermentation/aging tanks had made its way into the process with American microbrewers yet.

I vividly recall that ’Gansett was delicious, and it has become the kind of

beer I really enjoy these days. I wanted to recreate it, so I formulated Flubadub ’Gansett Porter to replicate what I experienced in 1982. It was after I had formulated my recipe that I came across the above description, and to my delight, my recollection jived with the brewery’s description with one exception. My beer is a bit lower in alcohol content, which is where I am at these days.

Bullion hops are very difficult to get, so I substituted German Hallertauer. Their low bitterness and earthy flavors are easy to navigate. You’ll notice I add a touch of homegrown wild Colorado

hops. These hops have a sulfur-like onion character and hardly any bitterness value; their bittering contribution to this recipe is only about 3 IBU. My feeling is that a blend of wild hops and Hallertauer can somewhat replicate Bullion’s character.

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

**Charlie Papazian is founder of the American Homebrewers Association and the author of *The Complete Joy of Homebrewing*.**



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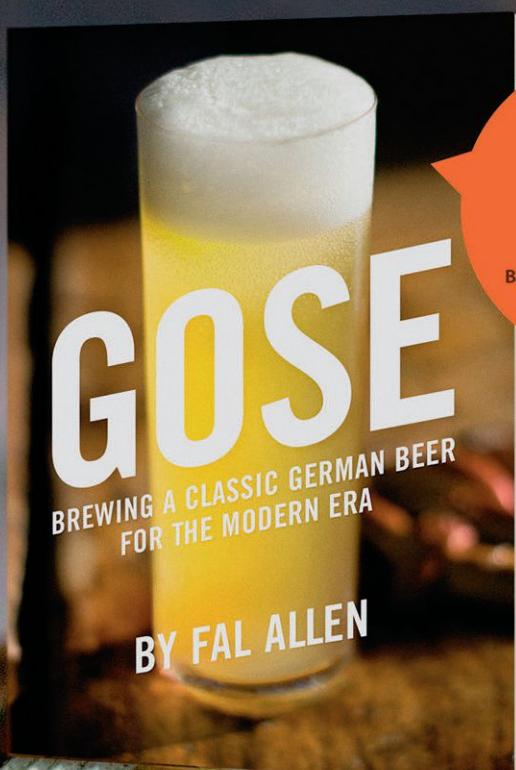
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**Alternative Beverage - Cornelius**  
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Cornelius, NC 28031  
(704) 527-2337  
[ab@ebrew.com](mailto:ab@ebrew.com)  
[ebrew.com](http://ebrew.com)

**Bull City Homebrew**  
1906 E Nc Highway 54 Ste 200B  
Durham, NC 27713-5298  
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[americanbrewmaster.com](http://americanbrewmaster.com)

**Atlantic Brew Supply**  
3709 Neil St  
Raleigh, NC 27607-5415  
(919) 670-4043  
[info@atlanticbrewsupply.com](mailto:info@atlanticbrewsupply.com)  
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Columbus, OH 43214-4042  
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Sandusky, OH 44870-8375  
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[info@learntobrew.com](mailto:learntobrew.com)

[learntobrew.com](http://learntobrew.com)

Learn To Brew is run by a professionally trained brewer and offers a complete line of beer, wine, and draft dispense products and equipment and also offers beer and wine classes for all levels.

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[oregonshoppyplace.com](http://oregonshoppyplace.com)  
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[salembrewsupply.com](http://salembrewsupply.com)

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[voelckerbeverage.com](http://voelckerbeverage.com)

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# Glitter? Not in My Beer!

Women are a minority in the brewing world, both in homebrewing and at the professional level. In the 2018 AHA survey, it was reported that 93 percent of AHA members are male. As a female homebrewer, I would be thrilled to see that 7 percent increase. Recently, however, I have observed trends—trends perpetuated by women—that diminish the status of women in the craft brewing industry and in homebrewing. The one that is most pervasive and harmful is glitter beer. This “style” is often made when a group of women, often a mix of professional and amateur brewers, brew beer together at a craft brewery.

I recently attended a MeetUp group outing of all-female craft beer enthusiasts. The head of the group mentioned an upcoming brew day at a craft brewery. She was describing the style we would be brewing, and then said, “Of course we’ll be adding glitter.” Of course. Because we are women and happen to be brewing a beer, it must contain glitter. I also saw this happen at a Pink Boots brew day in which I participated. My protests against this unnecessary ingredient fell on deaf ears. I think female craft brewers should be taken seriously and respected. Adding glitter to beer does not garner respect.

I have had my own struggles being treated with respect by other homebrewers. About 9 times out of 10, if I start a conversation with a male brewer I have not met before, he assumes I am inexperienced and unknowledgeable. This rudeness isn’t intentional in most cases. It is simply a common and unfortunate assumption that because I don’t have a beard, I must not know much about brewing.

I cannot count how many times I have been asked, “Have you ever brewed before?” at a homebrew club meeting. I have

**MAKE THE BEST  
POSSIBLE BEER  
THAT YOU CAN.**

**DON’T CUT CORNERS.  
STRIVE TO BE THE BEST.**

**CREATE A NEW STYLE.**

had homebrew store employees ask if I was buying ingredients for my husband. I have been brewing all-grain for seven years and have won medals in competitions. Making glitter beer only serves to justify the notion that women in brewing are not worthy of respect. It’s a cliché.

Glitter beer assumes that all women must love glitter, which is not true. Aren’t we tired of people making assumptions about us? Maybe the change can start with us! Glitter beer is akin to a female police officer having pink, glittery handcuffs simply because she is a woman. Another male-dominated profession is culinary arts. Yet, we do not see female chefs sprinkling bisques and duck confit with glitter.

Nobody really seeks out glitter beer. You don’t see people lined up around the block for a can of glitter blonde. It doesn’t really add any substance or flavor to the beer. It’s a novelty item. Plus, it’s made of the mineral mica. Maybe I’m out in left field, but I don’t want sand in my beer.

There are more constructive ways for women to make their mark in the brewing world. Make the best possible beer that you can. Don’t cut corners. Strive to be the best. Create a new style. Combine ingredients that nobody ever has (preferably non-mineral ingredients that are actually food). If you insist upon including glitter in the process, put it on the outside of the beer, and design an awesome label. (I recall an IPA in a hot pink can at The Shop in Tempe that had people lining up out the door.) Ditch the glitter beer. We’re better than that.

**Christiana Bockisch enjoys the scientific and technical aspects of brewing. In May 2018, she earned her PhD in chemistry at Arizona State University.**





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