

80+
REVIEWS

BIGGEST-EVER IPA BLIND TASTING!

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Beer

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MAKE AND DRINK
GREAT BEER

& Brewing
Magazine®

The United States Of

IPA

- » Secrets of Great IPA Brewers from across the Country: New England, SoCal, the Midwest, PNW, and More!
- » Brew Better IPAs: Yeast & Water Tips
- » IPA Freshness: Is It Overrated?

PLUS:

Cook With Sour Beer: 5 Delicious Recipes

In The Cellar: Don't Age These Beers!





Weihenstephan

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April 23, 1516

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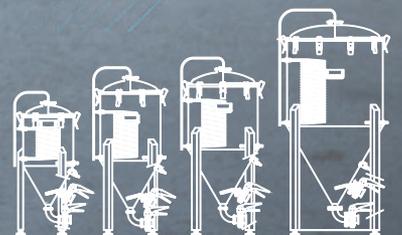
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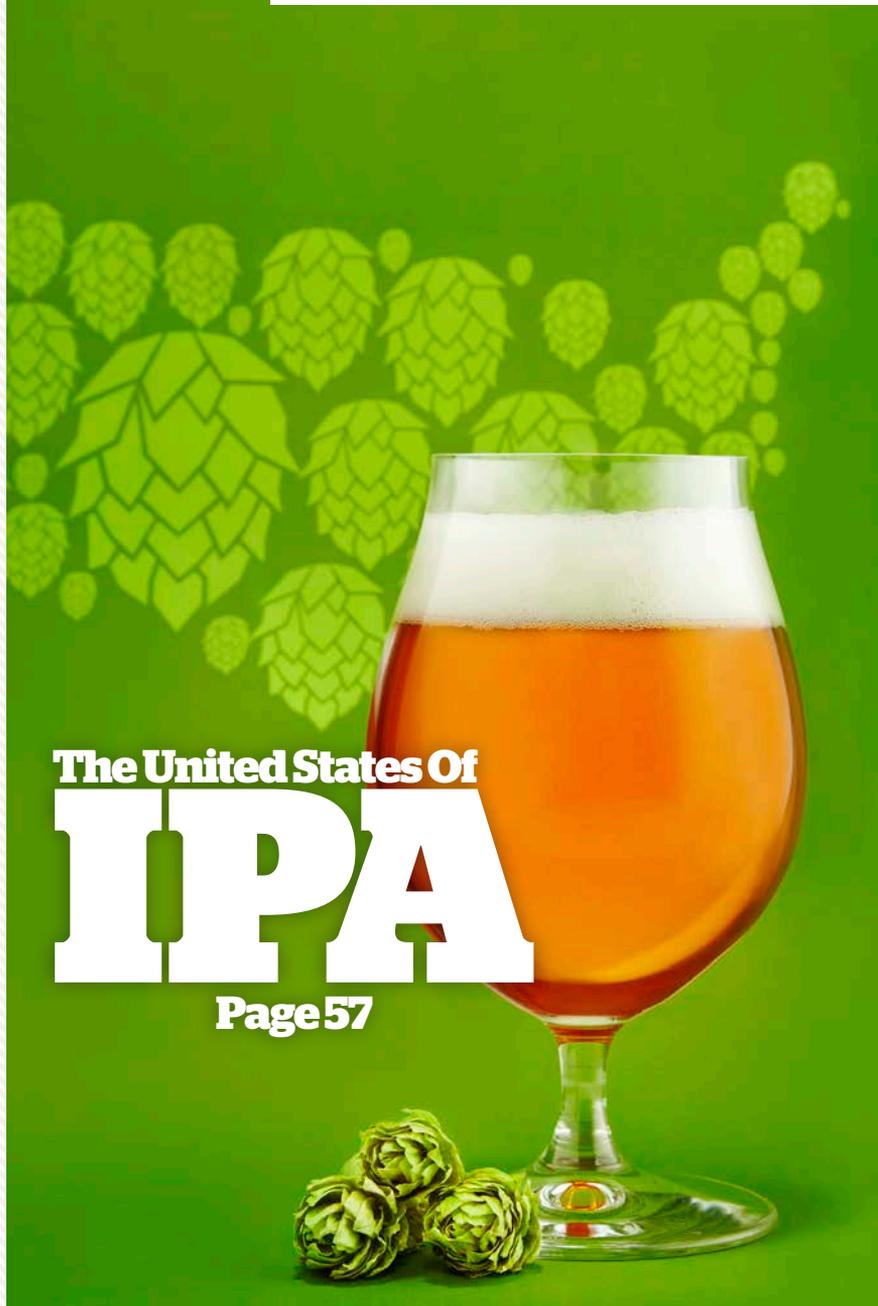
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**BREWING
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The United States Of
IPA

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FEATURES

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The United States of IPA

It's been two years since we last turned our focus to the most popular craft-beer style in America, and in that short time, the landscape has grown increasingly diverse. Join us as we explore that diversity.

58 | The IPAs of California

The bright, bitter, and aromatic India pale ales of California sparked an infatuation with hops that emanated across the craft-beer landscape and developed into the modern IPA style.

61 | The IPAs of the Pacific Northwest

We asked the brewers at Fremont Brewing, pFriem Family Brewers, The Commons Brewery, Boneyard Beer, and Block 15 whether they consider "Northwest-style" IPA its own subcategory of the IPA family. Here's what they had to say.

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When it comes to making IPAs in the Midwest, today's brewers are marrying Old-World tradition with New-World ingredients for a richer, fuller flavor.

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70 | Hops Aroma: Uncharted Waters

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2015

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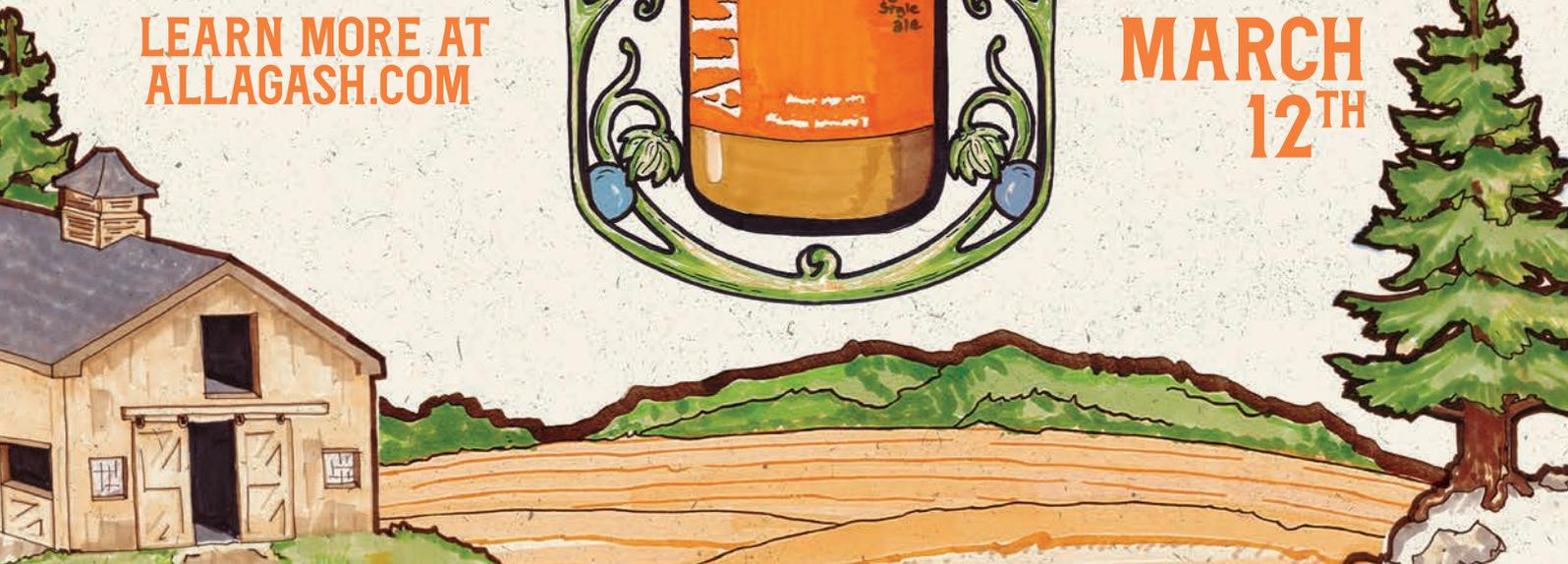
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MARCH
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IPAS

Alpha IPA

Block 15 Brewing Owner Nick Arzner

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Dead President Double IPA

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Less Thinking IPA

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Double Sunshine IPA

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Ben's Double IPA

Wormtown Brewmaster Ben Roesch

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WILD & SOUR

Bees American Wild Ale

Trillium Brewing

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Tara Nurin is a nationally published freelance journalist and beer columnist and a Cicerone Certified Beer Server. She runs Beer for Babes, New Jersey's original beer appreciation group for women, and serves as publicity director for the Pink Boots Society. She leads tasting and pairing workshops through her company, Ferment Your Event.



John Verive is a Southern California native and freelance writer dedicated to growing the craft-beer scene in L.A. He's the founder of Beer of Tomorrow (BeerofTomorrow.com) and the editor of *Beer Paper LA* (a monthly print newspaper). He covers the beer beat for the *Los Angeles Times* and is a certified cicerone.



Emily Hutto is a Colorado-born travel writer with an affinity for fermented beverages. She's the author of *Colorado's Top Brewers* and a contributor at many craft-beer and food-centric publications. Find her ethnography at emilyhutto.com.



Tom Wilmes is a beer drinker with a writing habit. A former Boulderite and *Daily Camera* beer columnist, he now calls Lexington, Kentucky, home. His fridge is usually stocked with a wide variety of local craft brews.



Norman Miller has been writing the "Beer Nut" column and blog for the *MetroWest Daily News* in Framingham, Massachusetts, and the Gatehouse Media family of newspapers, since 2006. He has also authored two books: *Boston Beer: A History of Brewing in the Hub* and *Beer Lover's New England*.



Stan Hieronymus has been writing about beer for more than twenty years, including three books popular with homebrewers—*For the Love of Hops*, *Brew Like a Monk*, and *Brewing With Wheat*.

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Please drink responsibly.



Everyone has an opinion about IPAs. It's unavoidable, given the dominating market share that the IPA style commands. But the beautiful thing about the style is its ubiquity—nearly every brewer in the United States brews one (homebrewer or professional brewer), and the range of expressions contained within this singular style is really and truly unprecedented.

This diversity within the style became immediately apparent to us when we started this issue. Our first issue (a mere twenty months ago, if you can remember back that far) focused on the IPA style, yet it feels worlds apart from where the IPA style is today. Then, we were still enamored with brewers who were competing to make more and more bitter beers. Now, the tide has turned, flavor hops reign supreme, and the new direction is to see how far back one can dial the bitterness while saturating the beer in hazy, unfiltered, fruit-forward hops goodness.

We're excited by this shift, by the way, and we're even more excited by the growing understanding among brewers and drinkers that the term "hoppy" means so much more than "bitter." This reductive definition is one we can't abandon quickly enough. Thankfully, talented brewers are making the case for hoppy meaning flavorful, fruity, citrusy, tropical, and earthy, and with so many stellar examples of hops driving gorgeous flavors in IPAs, it's only a matter of time before the association with bitterness alone is gone.

Regardless whether you brew beer yourself or just love drinking the best of it, there's something in this issue for you. Whether it's our exhaustive package on regional IPA specialization with stories by John Verive (page 58), Emily Hutto (page 61), Tom Wilmes (page 64), and Norman Miller (page 67); Dave Carpenter's stories on brewing IPAs (starting on page 74); or Stan Hieronymus's story on hops oils (page 70), our in-depth coverage explores every aspect of what IPA is right now in 2016.

If IPAs aren't your thing, take a look at how Colorado brewer Troy Casey pushes the boundary of fruit beer (page 30) or explore Bell's Brewery Director of Operations John Mallett's specially selected six-pack—hint, it's not all malty beer (page 42).

Whether you're a fanatical hophead, stovetop brewer, or all-grain enthusiast, we hope you enjoy this issue. We made it for you.

John, Jamie & Steve
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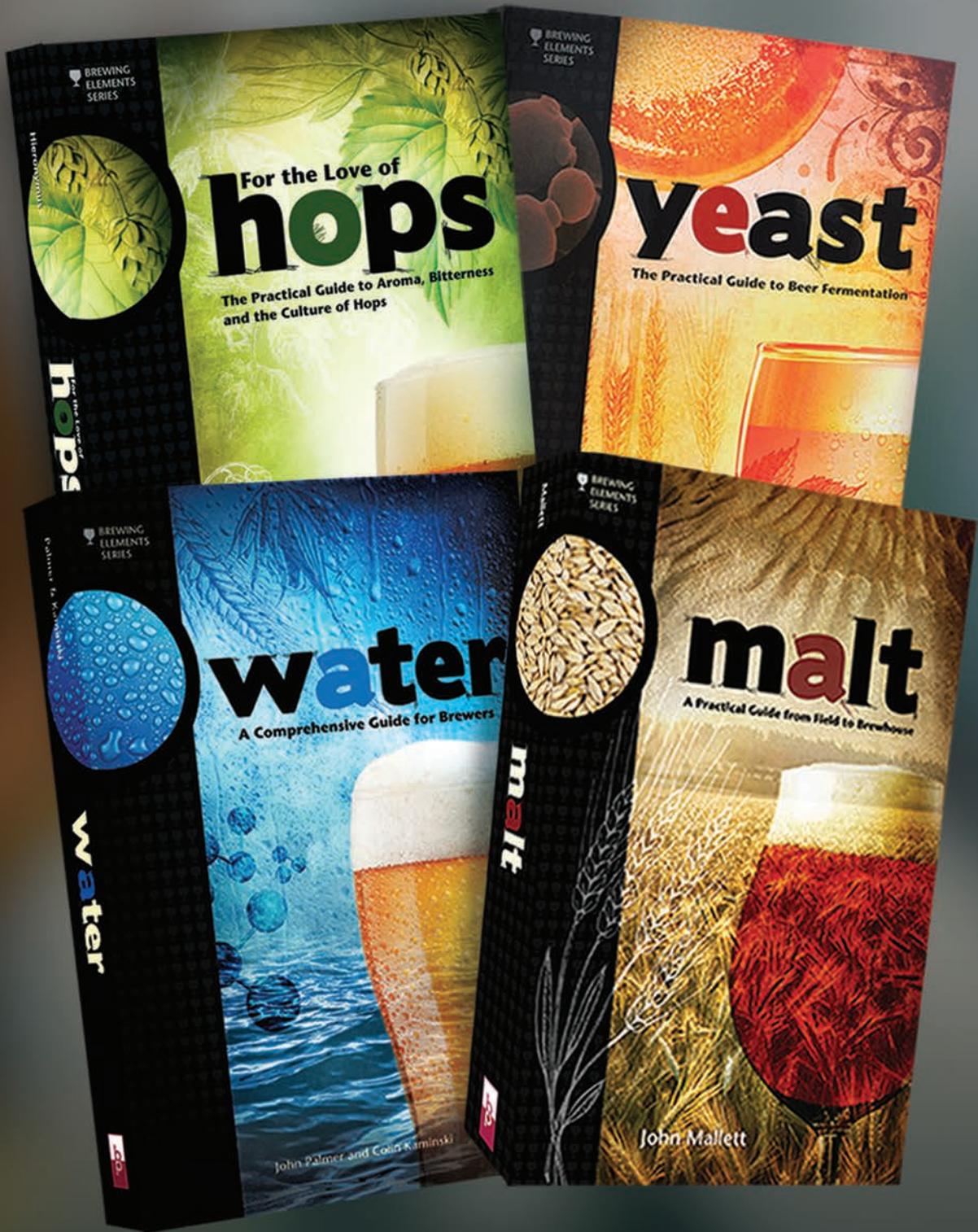
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Gerry Lynch

1st - Category 18

NHC 2015

“I went through 4 recipe variations, entered several local competitions and took in everyone’s advice before I entered the final version of my NHC gold medal winning Tripel to the National Homebrew Competition. The one thing that didn’t change is my use of PBW and Star San throughout the entire process. My guarantee to a clean brewing process every time.”



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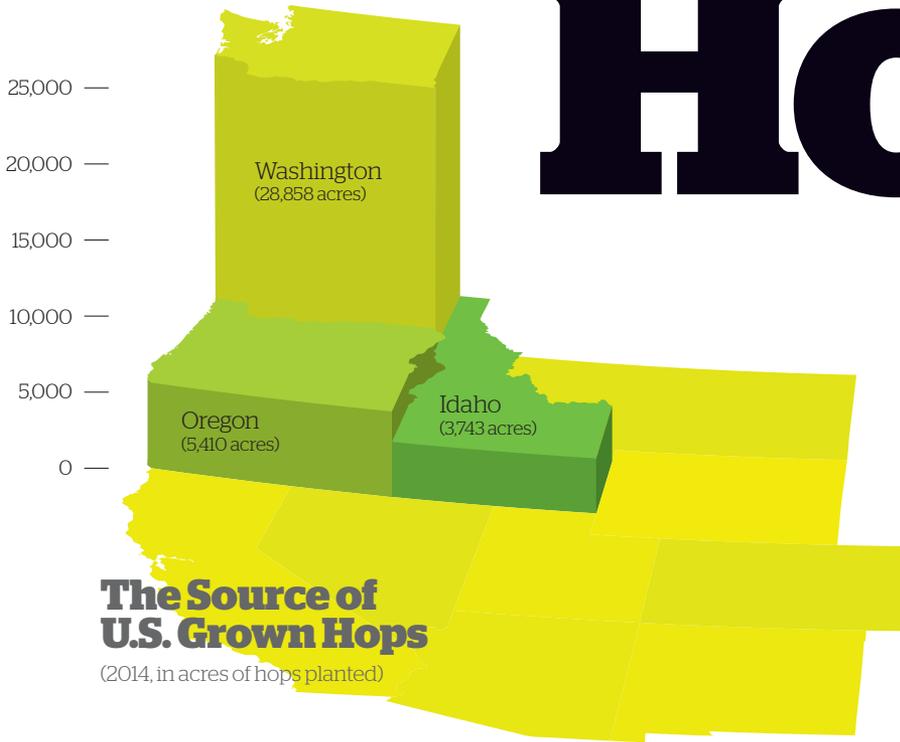


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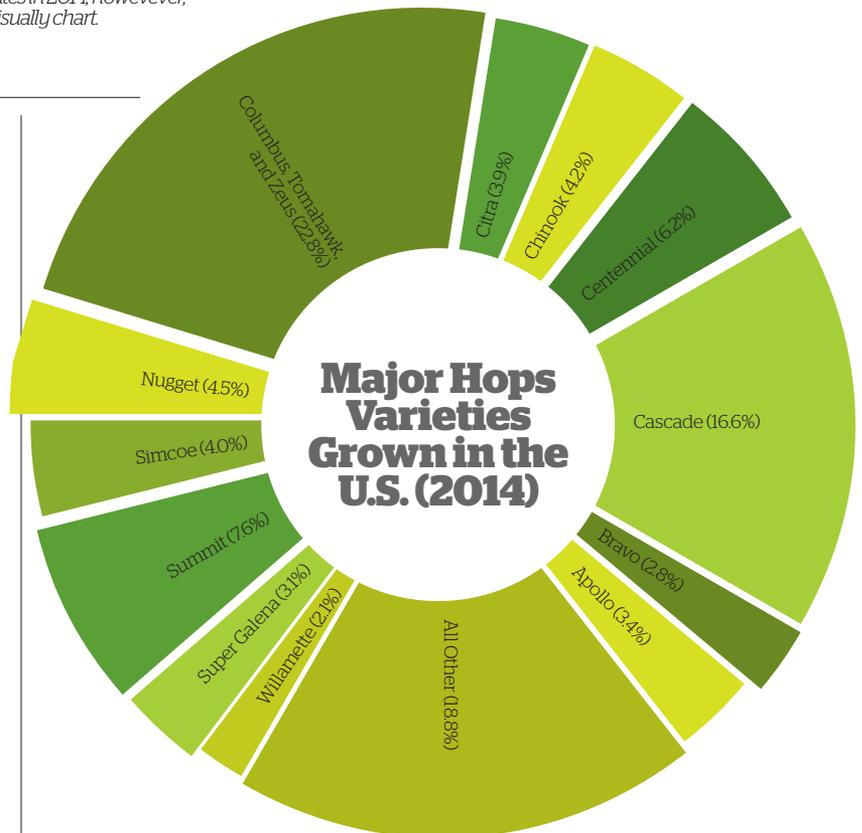
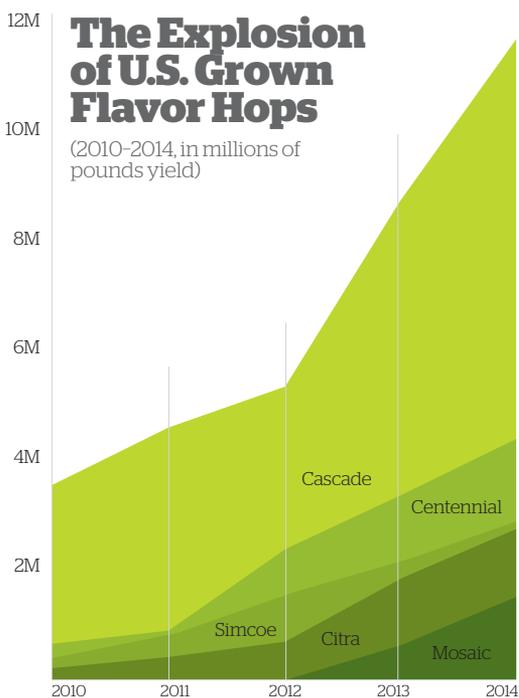
Hops



It wouldn't be beer without hops, and the United States is the second largest producer, worldwide, of these precious green cones that give so much flavor to beer. There's a monumental shift underway in the type of hops grown, as hops varieties with higher alpha acids (responsible for bittering) replace lower alpha bittering hops (it's more efficient that way, after all), and fruit-forward flavor hops such as Citra, Simcoe, and Mosaic in high demand from brewers are planted as fast as growers can get them in the ground.

Data source: U.S. Hop Growers Association

Note: Hops were reported as commercially grown in 16 total states in 2014; however, the production of the other 13 states is too small to visually chart.



EDITORS' PICKS

Beer Pairing & Cooking Books!

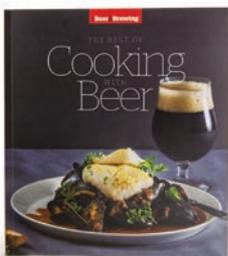
Beer and food is a hot topic in the publishing world. Here's a quick rundown of our recent favorites. **By Jamie Bogner**



BEER PAIRING

BY JULIA HERZ & GWEN CONLEY, VOYAGEUR PRESS, 2015

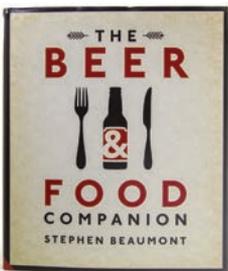
There might be no better authority on beer and pairing in the world than Julia Herz, and this book with coauthor Gwen Conley is the most thorough, in-depth exploration of the topic we've seen. From the deep dive into the sensory mechanisms of the nervous system to personal recommendations from leading brewers and foodies to a style-by-style guide to pairing suggestions, *Beer Pairing* covers all the bases and then some. A library essential for anyone interested in pairing.



THE BEST OF COOKING WITH BEER

CRAFT BEER & BREWING, 2016

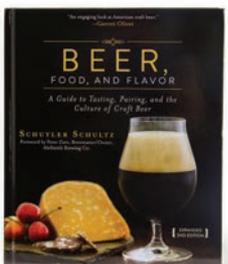
Indulge us in a moment of shameless self-promotion, but if you enjoy the Cooking with Beer section in every issue of this very magazine, you will love the book we've compiled from these recipes. We've taken yours and our favorite recipes, conveniently organized them by type of dish, and printed them on beautiful heavyweight paper in a book that you can use for years to come. If the recipes you've clipped from the magazine are getting dog-eared in your recipe binder, this book is for you.



THE BEER & FOOD COMPANION

BY STEPHEN BEAUMONT, JACQUI SMALL, 2015

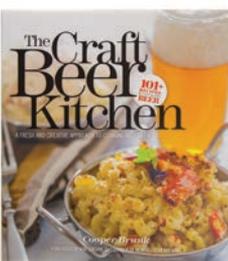
Less theoretical than other guides, the latest from Stephen Beaumont is a worldwide celebration of the flavors of beer and how they work in and with food. He pulls on a deep knowledge of beer, brewers, and cuisine across the globe, and the breadth of the book is impressive—from beer styles to pairing history around the world to handy reference charts plus 70+ pages of beautifully photographed recipes using beer. While it's a bit UK-centric in the approach to beer brands, the experience is universal.



BEER, FOOD, AND FLAVOR

BY SCHUYLER SHULTZ, SKYHORSE, 2015

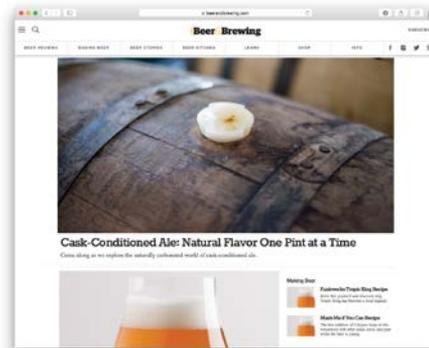
This expanded and updated version of the 2012 book digs into food and beer from a chef's perspective—science takes a back seat to sensory in this dive into the mind of a professional chef, and the 40-page chapter on pairing beer with cheese is one of the more extensive we've ever seen. There's definitely some filler content in there to stretch to 338 pages, but the exploration of the intimate ways a chef thinks about flavor in food and beer is worth the price of admission.



THE CRAFT BEER KITCHEN

BY COOPER BRUNK, CRAFT BEER & BREWING, 2015

When Cooper Brunk first sent us this book to consider, we were taken aback by his creative, elevated approach to cooking with beer that he refers to as "haute beer." Not content with the same old standard recipes, Brunk finds ways to pull creative and complementary flavors out of the beer used in everything from crusted pork loin to artichoke tarts to pumpkin ale profiteroles. It's mouthwateringly styled and photographed by Christopher Cina, and we often cook from it ourselves.



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The Best Beer & Brewing Content On The Web

We're adding more of our great magazine content to the **beerandbrewing.com** website, letting you read and share stories through social channels. You'll also find great content such as technique articles to help you make your best beer, unique and tested original beer recipes, revolutionary online craft-beer and brewing education, plus a free eNewsletter that will deliver free tips, techniques, news, and special offers. Here are a few of the most popular stories on **beerandbrewing.com**:

Top Stories

21 Stouts to Welcome Winter

Stout season is year-round for many of us and we'll take any excuse to enjoy one of our favorite styles. Since the weather is taking a turn toward a season I typically dislike, the consolation prize is the release of roasty, chocolaty goodness. Don't even try to argue when stout season "officially starts"; I don't care. Give me one of these twenty-one stouts to welcome winter.

Brew Test: Electric All-in-One Brewing Systems

An electric revolution is underway in the brewing world, with small, efficient systems at accessible price points attracting more and more brewers. How do these competing systems stack up? We took four systems into our brew lab and put them to the test to help you decide whether an electric turnkey system is for you.

Homebrewing Techniques

Barrel Aging for Homebrewers

Barrel aging opens up a wide range of flavors to patient homebrewers. From how to source barrels to aging on fruit, award-winning homebrewer Neil Fisher offers these helpful tips to get you started barrel aging your beer.

Top Recipe

Copper Kettle Mexican Chocolate Stout

Mexican Chocolate Stout was one of the first beers that Copper Kettle Brewing Company brewed after it opened in Denver, Colorado, in 2011. The beer won gold the same year at the Great American Beer Festival (GABF) in the Herb and Spice Beer category. According to owner and head brewer, Jeremy Gobien, Mexican Chocolate Stout is very sensitive to temperature, and warm storage can deteriorate the spice flavors. So keep it cold and drink it fresh!

PHOTOS: JAMIE BOGNER

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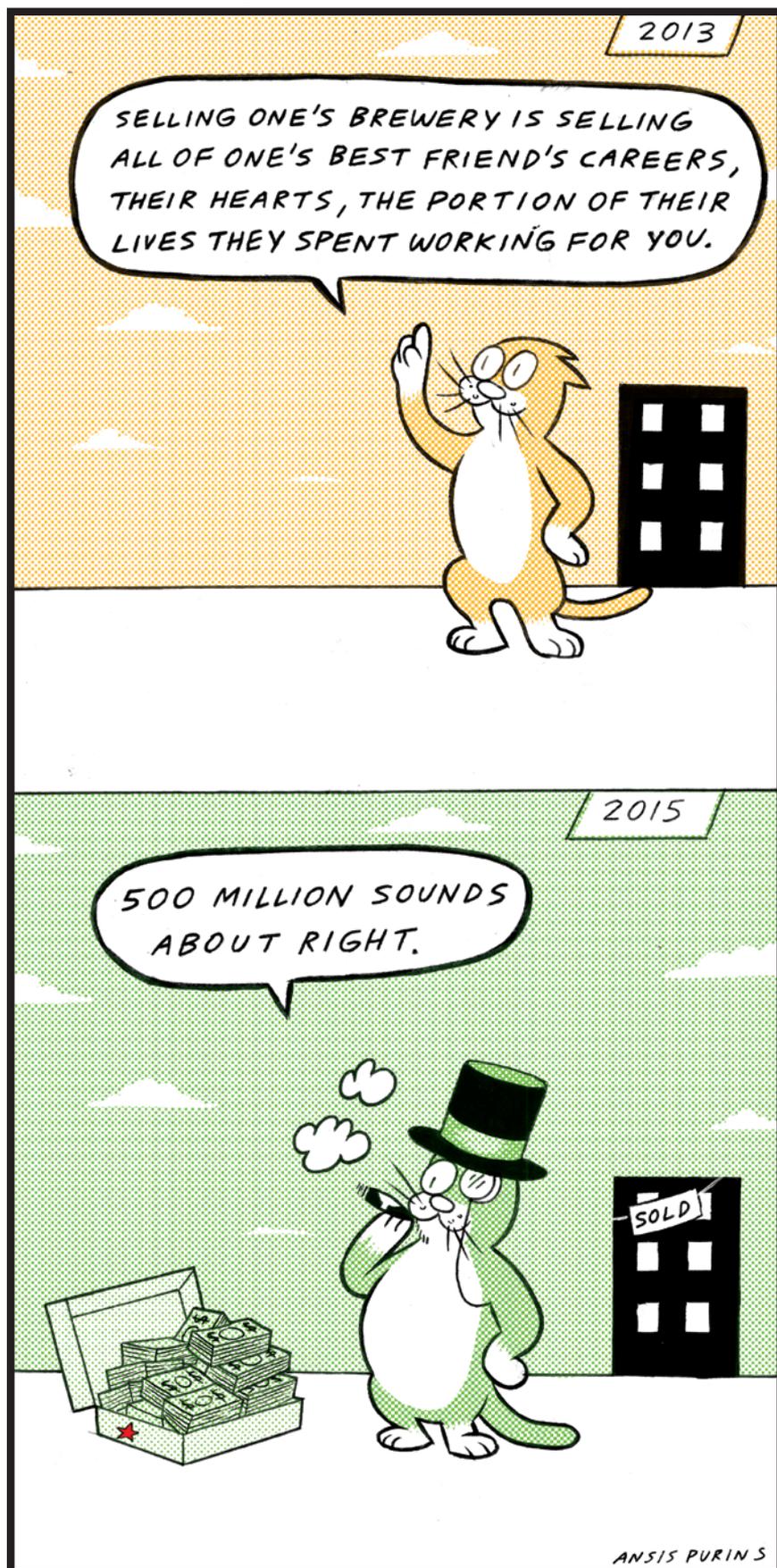
*Applies to 7.5, 10, 15, and 20 gallon pots.

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Whalez, Bro.

By Ansis Purins



BEERSLANGING

Language for Beer Geeks

A quick and humorous key to deciphering the slang terms thrown around in the world of Beer Geekdom.

» Russian Roulette

noun

A risky event involving beer that has a 50 percent chance or greater of being totally skunked depending on how it's been cared for. Sometimes these beers are world-class and sometimes they taste like mammalian scent glands. "Anybody want to play Russian Roulette with this bottle of Fantome?"

» Puritan

noun

A craft-beer drinker who is dedicated to maintaining a delusional perspective on the "purity" of the craft beer movement, eschewing those who drink "corporate beer." From a puritan, you might hear, "Lagunitas IPA used to be my favorite, but I don't drink it anymore since they sold out to Heineken."

» FOTM

acronym

Flavor of the Month, this is a beer that shows up everywhere as soon as a brewery introduces distribution into a new territory. "When Ballast Point started distributing here, Grapefruit Sculpin was the FOTM."

» Nerfed

verb

Term used to describe a bad change to a brewer's recipe, making the beer "softer" or lesser than the original. "That IPA used to be my favorite until they nerfed it by changing the hops profile."

» Remoras

noun, pl.

Like the fish that clean the parasites off of whales and other sea creatures, remoras is used to describe the non-beer geeks who you use to clean out the least desirable beers in your refrigerator. "My buddy came over and brought a couple of remoras with him; I finally got rid of all those amber ales."

For many more picayune beer terms, visit beerandbrewing.com and search for "beerslanging."

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Packing Beer: How To Get It There Safely

Whether you're sending your homebrew off to a competition, trading hard-to-find beer, or bringing it home from your latest beercation, you want it to arrive in its absolute best condition. We've tried every method in the book for transporting beer, and here are some of our tips for getting it there unscathed, at the right temperature, for the right price.



Styrofoam Shippers (with Cardboard Outer Boxes)

12 bottle shippers are \$11.95 from U-Haul.com, or \$16.40 from Uline.com (plus shipping)

PROS: Readily available for single unit purchase (no bulk quantity required); insulates beer in shipping; foam absorbs impact well; reusable; waterproof
CONS: Bulky; beer caps can chew into styrofoam if not protected
EXPERT OPINION: When shipping through delivery services, especially in winter, this is our method of choice. We wrap bottles with bubble wrap inside of the shipper to fill any void and prevent movement of the bottle, then tape around the styrofoam to seal it, and place that in a plastic garbage bag to seal again. Then we place that inside of the cardboard outer box and seal. This method is not foolproof—we've still had bottles break or freeze when shipped this way—but it's safer than the alternatives when the package is out of your hands.



Spirited Shipper Cardboard Shippers

12 bottle shippers are \$8.75 from spiritedshipper.com (plus shipping)

PROS: Lightweight; packs flat; relatively inexpensive; reusable
CONS: No insulation; no room in shipper for extra padding
EXPERT OPINION: These shippers are fantastic for shipping in warmer weather or when you're shipping in bulk (they ship flat to you and you fold them into shape Ikea-style, saving plenty on shipping compared to bulky styrofoam shippers). It's a good idea to stick to heavier weight bottles if you're using them—Belgian-style heavy weight bottles can stand up to the stress of shipping more than thinner-walled 12oz and 22oz bottles. We've had bottles break in these, but the failure rate is no better or worse than any other method.



Pressed Pulp Wine Shippers (with Cardboard Outer Boxes)

12 bottle shippers are typically \$6–\$7 when purchased in bulk (plus shipping)

PROS: Stackable; lightweight; inexpensive; somewhat reusable
CONS: Loose fitting; require extra packaging; no insulation; not waterproof
EXPERT OPINION: One of the best uses we've found for these pressed pulp shippers is to stack them and stuff the stack in your luggage, then use them inside your suitcase on a return trip to protect your bottles. They're inexpensive, and the fact that they fit together makes them easy to consolidate when shipping empty. For delivery services, we prefer other methods because bottles fit so loosely inside of them, they aren't insulated, and the paper pulp will fail if a bottle breaks, putting all the rest of your bottles at risk.



Bubble Wrapped Bottles Packed with Paper or Peanuts

\$17 for a 150-foot roll plus the cost of an exterior shipping box

PROS: Inexpensive; readily available materials; adaptable to any bottle size
CONS: More movement of bottles in the box, not waterproof without lots of tape; difficult to pack and even more difficult to unpack
EXPERT OPINION: Truthfully, we prefer this method over pressed pulp shippers, as each bottle or can is protected from impact and if a bottle or can breaks or punctures, it doesn't put the others at risk. Wrap each bottle or can individually, then tape them together so they don't move independently, and place that unit in a plastic bag to protect from leaks in the event a bottle breaks. The recipient will have an adventure unpacking the box, but odds are your precious cargo will arrive safely.

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SAY GOODBYE TO YOUR AIRLOCK

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MAKE IT POP!

Beer bread is great, but beer bread poppers are even better. This mix from Boardwalk lets you make the delicious rolls with your favorite beer, and the sky's the limit when it comes to adding your personal touch—add jalapenos, cheese, etc., to make them your own. boardwalkfoodco.com



CHILL OUT

You want the beer you brew to taste its best, so cooling it quickly after the boil is key. The counterflow chillers from ExChilerator work faster than immersion chillers and are easier to clean than plate chillers, giving your beer the advantage in the war against off flavors. ExChilerator.com



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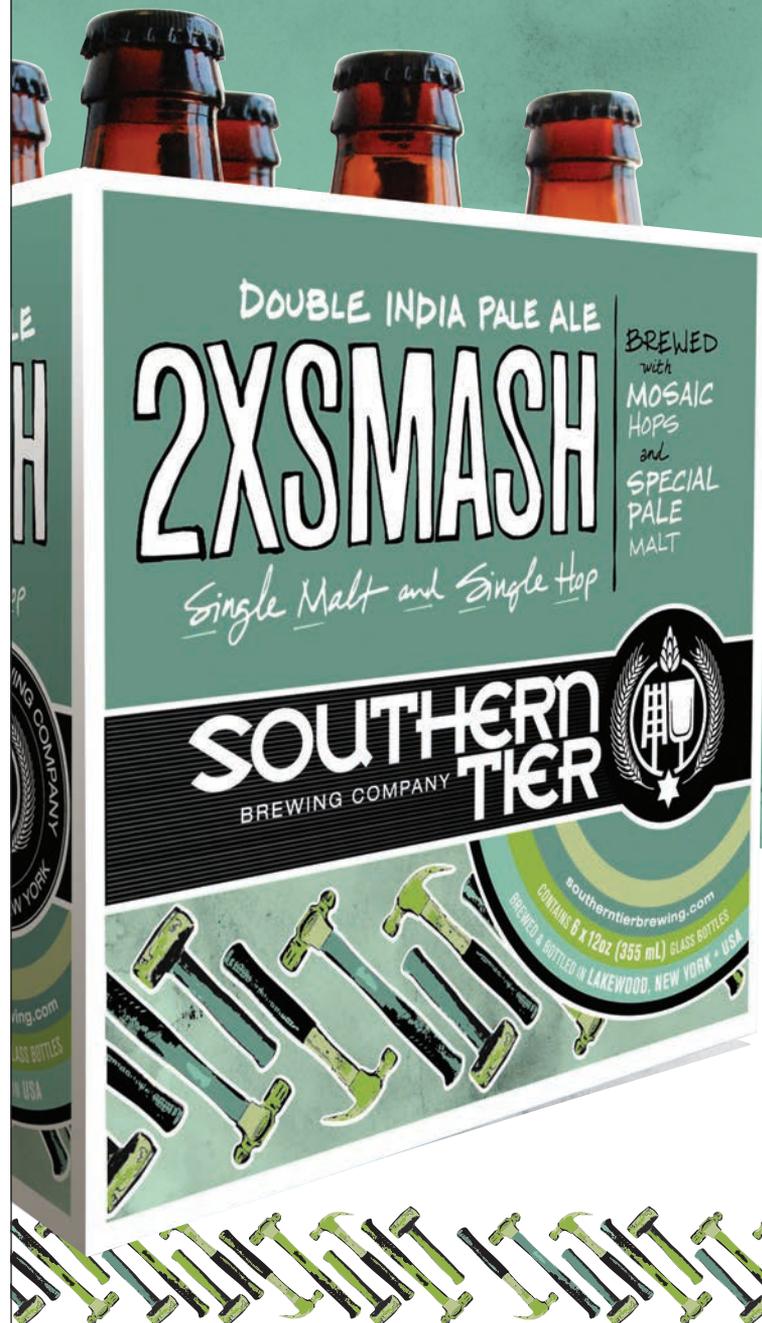
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Sovereign

Plainfield, Illinois

Sovereign curates Chicago and the Midwest's best beers for you and serves up farm-fresh food in a friendly space.

What it is: Cool meets comfortable at this suburban Chicago locale featuring twenty-five stellar and rapidly rotating taps (including two selections on cask), with styles from around the globe made mostly by Midwest brewers. Locally sourced farm-to-fork cuisine and serious cocktails complement the craft-beer program. Ace servers smartly share key flavor profiles of the beers and help diners select a dish from the kitchen to match. With a soothing décor of deep grays, rustic wood, and sleek tap handles inside and a lazy-day summer patio outside, there is a place for everyone at Sovereign.

Why It's Great: The last time in, I sat at the bar enjoying a New Holland Blue Sunday Sour, malt-forward with dark fruit and a seriously lingering sour finish. My server suggested pairing it with their Beautiful Disaster, a Gruyère, Parmesan, and Brie grilled cheese with onion marmalade on rye. It was an outstanding recommendation. I then opted for the Penrose Coffee Navette, a dark Belgian coffee ale brewed with Intelligentsia Tres Santos coffee. This lightly roasty, bitter-yet-balanced offering is solid and is made even better by the care taken to serve it right. This is one craft-beer restaurant worth the trip. —*Sara Dumford*

Details

Hours: 11 a.m.-midnight, Monday-Saturday; 11 a.m.-10 p.m., Sunday
Address: 24205 Lockport St., Plainfield, IL
Web: sovereigntap.com



The Hop Stop

Nashville, Tennessee

Fanatical curation meets comfortable vibe in this Southern favorite.

What it is: At first blush, this off-the-beaten-path locals' joint is unassuming and inconspicuous. However, once you snag a coveted seat at the bar, you'll find one of the most thoughtful tap lists in the city and a friendly staff that really knows its stuff.

Why It's Great: Beer Director Matt Miller has done a fantastic job with the list, which boasts more than thirty rotating taps focused on serving the very best beers available in Nashville and the cream-of-the-crop releases from local breweries. With a great selection of big dark beers, sour and tart beers, and refreshing IPAs, these guys tap a new beer almost every day. In addition to thoughtful and well-executed beer cocktails, they have a stellar bottle list, regularly stocking world-class Belgian imports and local Yazoo sours.

The bar itself is comfortable and welcoming with a thoughtful food menu, a room for darts, and a generally laid-back aesthetic. The staff's knowledge of the beer list is fantastic and further separates The Hop Stop from some other craft-beer bars around town. In two short years, The Hop Stop has established itself as one of the best watering holes in Nashville for craft-beer lovers. —*Stephen Koenig*

Details

Hours: 11:30 a.m.-midnight, Sunday-Thursday; 11:30 a.m.-1:00 a.m., Friday & Saturday
Address: 2909 Gallatin Pike, Nashville, TN
Web: facebook.com/TheHopStop



Bluejacket

Washington, DC

The capital's commander-in-chief of brewpubs.

What it is: One of the nation's most ambitious brewpubs anchors Washington's resurging Waterfront district. Bluejacket is the brainchild of James Beard-nominated Beer Director Greg Engert and the restaurateurs behind D.C.'s world-class ChurchKey bar. Basically, this is what you get when the suits give one of the country's fussiest, most knowledgeable beer geeks free reign to develop his dream brewery. Inside a former Navy Yard munitions factory, three open levels of toys include a variety of fermentors, a coolship, and a barrel room. The fonts pour at different temperatures to ensure each style has its ideal coolness.

Why It's Great: The constantly rotating selection of twenty-five drafts—including five cask ales—covers a wide range of styles. None are boring. The dry-hopped Kölsch is as approachable to passing Nats fans as it is highly rated by tickers; meanwhile, there is typically a range of funky farmhouse beers that vary in acidity and ingredients—you might find a strawberry-rhubarb Berliner Weisse, *Brett* IPA, or kumquat gose. Or all of the above. Clever pub grub ranges from pan-seared cheese spaetzle to duck confit potpie. Easy to reach via the Metro, it is inevitably popular before and after Nats games, but with 200+ seats, it's also large enough to accommodate. —*Joe Stange*

Details

Hours: 11 a.m.-1 a.m., Sunday-Thursday; 11 a.m.-2 a.m., Friday & Saturday
Address: 300 Tingey St. SE, Washington, DC
Web: bluejacketdc.com

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Opposite » Three scenes from the new Surly Brewing destination brewery include communal tables in the beer hall and the jaw dropping modern exterior and landscaped property.

Hidden Gems in the Midwest



MINNEAPOLIS-ST. PAUL BY THE NUMBERS

50 BREWERIES & BREWPUBS

5 HOMEBREW SHOPS

46 GABF MEDALS



Since Minnesota legislators approved tasting-room pint sales three years ago, the Minneapolis-St. Paul metro area has metamorphosed into an under-the-radar gem, with fifty breweries scattered around town and a bar/restaurant scene that supports them zealously. **By Tara Nurin**

LET'S BE HONEST. UNLESS YOU'RE a Minnesotan, Minneapolis and St. Paul probably don't top your list of beer metropolises. But don't let that keep you from beercationing in these Twin Cities. You'll need to drive or Über/cab to get around because Minneapolis and St. Paul house few walkable brewery clusters and some of the cities' seven Great American Beer Festival (GABF) award winners lie outside easy train reach. Fuel up with cheese curds, the local finger food of choice, and start your tour.

Breweries

Your mission for day one, should you choose to accept it: do not check into your hotel, do not pass go. Head directly to **Surly Brewing**.

Thanks to construction of Surly's grand and sunny "Destination Brewery," you can easily spend your entire afternoon pairing 8-, 10-, or 16-ounce pours of twenty-three different beers with eclectic foods such as farro salad, smoked brisket, bone marrow, or South Asian chaat. Time your visit right, and you may stumble on Darkness R.I.S. or Fiery Hell wood-aged lager with puya chiles.

The hall welcomes kids with a play area and a children's menu. Upstairs, the

more formal Brewer's Table restaurant and bar matures the brewery experience with à la carte seasonal dinner options, a four-course pairing meal, and a tasting of chocolate "five ways."

Take an hour-long guided tour and you'll learn fun facts: Founder Omar Ansari convinced his Pakistani and German parents to convert their abrasives factory into a brewery, and Todd Haug worked as a heavy-metal guitarist before joining Ansari as head brewer; they named their business "Surly" because their inability to find good beer made them feel ____ (fill in the blank); the law that legalized pint sales is nicknamed the "Surly Bill" to credit Ansari and Haug for spearheading its lobbying efforts.

Walk off your food coma by strolling a mile to St. Paul's cluster of breweries, starting with **Urban Growler**, where crowds support the state's first female-owned brewery by quaffing the women's Big Boot Rye IPA and CowBell Cream Ale with the chef-created salad, sandwich, and burger menu. **Bang Brewing**, a novelty housed in a corn crib, is practically next door, and **Burning Brothers** and **Lake Monster Brewing** wait nearby.

PHOTOS: COURTESY SURLY BREWING





Day Trips

Try to squeeze in time for a two-hour ride to destination-worthy Duluth for tastings at two additional GABF medalists. Called “The Best Town Ever” by *Outside Magazine*, Duluth is making news for its burgeoning shopping and entertainment culture. **Bent Paddle Brewing** is the city’s most cherished beer export, while **Fitger’s** renovated 1885 brewery entices visitors with its medal-winning beers, three restaurants, two nightclubs, and one inn.

Ninety-five miles southwest of the Twin Cities in New Ulm, **August Schell Brewing Co.** stands as one of the nation’s last surviving nineteenth-century regional breweries, now run by the sixth generation of the Schell family. Arrive early for a tour on Friday, Saturday, or Sunday.

St. Paul also houses Minnesota’s oldest modern craft brewery. On most weekdays and Saturdays, you can spend 90 minutes touring **Summit Brewing** (with a reservation), then sampling the Extra Pale Ale, whose 1986 release helped pioneer the country’s hoppy revolution. Or skip the tour and come on Friday or Saturday for beers such as Great Northern Porter, Summit’s second-oldest offering. During tasting room hours, Summit, like most local breweries, rotates food trucks through its lot.

For something more substantive, ride across the mighty Mississippi River to some of the best brewpub food in the Twin Cities. **Northbound Smokehouse & Brewpub’s** chef smokes meats on two industrial smokers, while two Seibel Institute graduates brew complementary liquids they infuse with additions such as grapefruit and ginger every Tuesday.

In northeast Minneapolis, **Indeed Brewing** habitually includes surprising ingredients in their specialty and seasonal brews. Mexican Honey Imperial Lager took silver at GABF 2014, and this past fall, the yammy Yama Jama Harvest Ale generated hearty buzz. Co-owner Rachel Anderson has built two gorgeous, uber-eco-friendly tasting rooms in the 100-year-old Solar Arts Building, where visitors can wander through artists’ studios the first Thursday of every month. Scope out five tables in the brewery’s main taproom: they are nineteenth-century wooden doors

engraved with the signatures of authors and politicians (ahem, Teddy Roosevelt) who tiddled at the “club room” of an old neighborhood publishing company.

With northeast Minneapolis unofficially designated as the “Brewers’ District,” you can walk from there to **Bauhaus Brewlabs**, **Sociable Ciderwerks**, **612 Brew**, and **Dangerous Man**, where an iron door gives away the building’s history as a bank. Slightly farther, **Fulton Brewing** grabbed national headlines last year for its HefeWheaties, brewed collaboratively with General Mills, and kept up its profile with a subsequent GABF win for its Lonely Blonde English-style summer ale. According to Matty O’Reilly, who owns the craft-only bar Republic, no serious connoisseur should miss the nearby **Fair State Brewing Cooperative**, whose head brewer learned the trade at Jester King in Texas. “If you go there any Monday or Tuesday night, the taproom is full of other brewers,” he says. “If I’m looking for really good beer, I want to be where the brewers are.”

You might say the same about **Minneapolis Town Hall Brewery**, a brewpub where you need more than two hands to count the GABF medals and where plaza seating makes for great downtown people watching. Industry aficionados join suited-up

Above» Enjoying a round in the Indeed Brewing tap room. **Left»** The outdoor patio at Fair State Brewing Cooperative is a favorite hang for other Twin Cities brewers.

PHOTOS: COURTESY INDEED BREWING; COURTESY FAIR STATE BREWING COOPERATIVE

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Top» Town Hall Lanes mashes up great craft beer with a remodeled 1946 bowling alley. **Above**» Town Hall Tap offers nostalgic Minnesota brewing history along with Town Hall's own beer and a number of guest taps.

lawyers for Hope & King Scotch Ale and other predominantly British styles. In a town where most breweries open after 3 p.m. on weekdays, it's refreshing to start your day at 11 a.m. with a huge selection of lunch foods and a Grizzly's Mexican Coffee made with tequila, vanilla liqueur, and cinnamon.

Town Hall's owners run a trio of bars: the brewpub; **Town Hall Tap**, a burger joint with a mix of house and guest beers, including four on cask and four on nitro; and **Town Hall Lanes**, a remodeled 1946 bowling alley with ten lanes, the exclusive Town Hall Super Strike light lager, and twenty-five house and guest taps. Bowling Manager Matt Zastrow says, "You'll see a lot of wood from the 1920s (when the building was constructed). We put an antique bar in and old tin tackers, beer signs, and neons."

For more breakfast options, **The Herkimer Pub & Brewery** in the Uptown neighborhood opens at 10 a.m. daily for brunch. The Herk focuses on German styles and a few Belgians but switches things up with such brews as a golden strong ale brewed with citrusy Japanese yuzu fruit, an exotic ingredient that Insight Brewing in northeast Minneapolis puts into its Garden of the Hell Chicken pale ale. Herkimer owner Blake Richardson draws on his training as a sake master for the Imperial Red Saison with Koji, an inoculated sake rice.

Uptown makes the most convenient

launch point for can't-miss **Steel Toe Brewing**. Located just outside the Minneapolis border in St. Louis Park, Steel Toe brews some beers that Michael Askew, who publishes the nationally acclaimed *A Perfect Pint* blog from his home in the Twin Cities, calls "world-class." "For the Midwest, the Twin Cities is a hops-centric market. We love the IPAs and IIPAs. Steel Toe Size 7 is a standout," he says.

In Stillwater, outside the city's eastern borders, **Lift Bridge Brewing's** brewmaster, Matt Hall, brings his experience as Firestone Walker's production manager to his own wood-barrel aging program. Since Lift Bridge's 2014 expansion, Hall can also apply his chemistry and microbiology degrees to overseeing a quality-control lab.

Beer Bars and Restaurants

You can score Lift Bridge's beers on craft-only **Republic's** 104 taps, indicating that Matty O'Reilly deems them worthy of his exactly curated list. Though he devotes a whole section of his lineup to Minnesota IPAs and ciders, he won't serve local—or anything else—if it's too widely available or not of the utmost quality. "Our audience can trust we're putting the best out there for them," he says.

Republic dedicates a tap line to the kaleidoscope of Great Divide Yeti imperial stouts, claims the state's largest draft craft cider selection (twenty at last count), and pours cider flights with whiskey.

PHOTOS: COURTESY TOWN HALL BREWING

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Top » Copper-clad brew kettles at Summit Brewing. **Above** » Zipp's Liquors is a favorite for beer hunters.

Whiskey lovers pilgrimage to James Beard-nominated **Butcher & the Boar**, the number one Knob Creek Single Barrel account in the world. Minnesota's famous restaurant equally caters to beer connoisseurs with a certified cicerone on staff and a year-round beer garden whose taps pour rarities such as Odell Friek and Alaskan Smoked Porter.

For a fun twist, **JL Beers** burger bar mixes up beer cocktails in 8-ounce flutes, serves craft sodas made by Schell and Sprecher, and puts together five flights with cute names such as MN Nice.

Chasing down whales? At **SW Craft Bar**, patrons can build their own flights of hard-to-score labels such as AleSmith Evil Dead Red, Stillwater Artisanal Debutante, and Evil Twin James Beer. **Muddy Pig**, a pork-centric Mexicali bar whose tap list recently included Sam Adams Kosmic Mother Funk, Leifman's Fruitesse, and six options from Against the Grain, also comes through.

Bottle Shops

If you read review sites, you'll see **Zipp's Liquors** pretty much rules bottle buyers' hearts. Ask for the staff beer guru (Shaughn McCurdy, as of press time) for help navigating 1,500 beers, lots of cider, and one of the state's largest selections of organic and gluten-free selections.

With 1,860 different beers, **South Lindale Liquors** claims the most variety in the state, while owners at teeny **Ale Jail** make shopping 200 single bottles and an exten-

sive Belgian collection a goofily humorous adventure.

Other Fun Stuff

You can buy anything sold by **Northern Brewer Homebrew Supply** at its flagship store in Minneapolis. If the shop doesn't stock the experimental hops you want, a company rep will deliver it for pickup within about an hour. Free weekend classes demonstrate homebrewing techniques on a top-tier, pimped-out Blichmann system.

Geeky types should drop in on a **Better Beer Society** class or event. For \$10 you can "audit" a session of a twelve-week workshop that includes a speaker, panel, and samples; or you can reserve a spot at one of their elaborate pairing dinners.

Take home a souvenir from **The Beer Dabbler** boutique, selling brewery and custom shirts, glasses, tin tappers, tap handles, artwork, and anything else you might need to adorn your man or woman cave.

You may want to save your accessory shopping for Sunday and stock up on bottles on Saturday. Though state lawmakers started allowing Sunday growler sales in Minneapolis, St. Paul, and Duluth last year, they still bar liquor stores from opening on the day they'd rather meet you in church. Luckily, a lot more politicians voted to let liquor stores open on Sundays than the previous time they voted on the issue. So check back in a year, there may be Sunday bottle sales ... and, of course, more breweries.

PHOTOS: COURTESY SUMMIT BREWING

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Opposite » Troy Casey stands among open-top puncheons used for fermentation in his Glenwood Springs, Colorado, brewery.

The Company Man

From their small outpost in the mountains of Colorado, **Casey Brewing & Blending** is making waves with a focus on barrel-fermented, mixed-culture beers that celebrate heirloom fruit varieties from local growers.

By **Jamie Bogner**

TROY CASEY NEVER WANTED TO open a brewery. The former head of the AC Golden (Coors) secret barrel program loved working in his corner of the brewing giant and thought he would spend his career there, as did his father before him. While his father, a brewing chemist, spent thirty-plus years honing the highly automated process for creating the perfect light lager, Casey's budding interest in funkier brewing methods—barrel aging and mixed-culture fermentation—ultimately pulled him away from the corporate side.

“My then-girlfriend and now wife moved to Glenwood Springs [about 2.5 hours up in the mountains from Denver] for a great job. I'd make the drive up every weekend, and ended up falling in love with the Roaring Fork valley,” Casey says. “Eventually the switch flipped, and I realized I could start my own brewery. I always thought I'd be a company man at the big brewery—I loved it there—but over time the culture changed and it wasn't where I wanted to be. So we came to the conclusion to do it; I wrote up a business plan, took some small business classes, raised money from friends and family, and was scared shitless for the next year.”

Launching a new brewery is tough. But launching a niche brewery that brews only barrel-fermented mixed-culture beers (beers fermented not with a single *Saccharomyces* brewing yeast strain but with a culture of multiple strains that typically contain *Brettanomyces* and *Lactobacillus*) is considerably tougher. Fermentation time stretches from weeks at a typical brewery to months with mixed-culture fermentation. And after brewing and loading up barrels for fermentation, there's no guarantee a brewer will get something out of the barrel that tastes good.

“The reason most brewers aren't doing what we're doing is that you don't have anything to fall back on [if a batch doesn't work out]. I'd only brewed my Saison recipe three times before starting this, and I got really lucky with my early batches,” says Casey.

“When I first tasted the barrels of Oak Theory [a golden sour], they tasted so bad that I didn't sleep for a week. Luckily, they came around.”

Adding another level of complexity to the strategy is his focus on using only Colorado-grown fruit. While many brewers today use aseptic fruit purée from large fruit packaging companies, Casey takes advantage of his proximity to the fruit

growing region on Colorado's Western Slope, and has brewed using a variety of heirloom fruits that aren't necessarily grown on a large commercial scale.

“I'm starting to realize that people love our fruit beers a lot, so I'm trying to capitalize on all this fresh fruit that we've got going on,” says Casey.

“When I tell farmers how much I'm looking for—sixty pounds up to hundreds of pounds—most just laugh at me. Not too many people are doing that, but I'm finding the ones who are and taking them all. What's fun about [my focus on Colorado ingredients] is that it's not as simple as getting a purée from the Northwest. It's talking to people, telling them my story while they tell me theirs, and connecting with them. Now farmers are talking to each other about me, and being able to affect their businesses like that is pretty cool. Sometimes they don't have an outlet for some of the varieties they grow, so me coming in and taking 400–500 pounds is significant to a lot of these growers. It's pretty fun to see that mutual respect.”

Casey's Fruit Stand beers are produced by adding fruit to fully fermented saison (that's rested for 3–4 weeks before it gets fruit), then allowing the active culture in the beer to referment the sugar from the fruit until the beer again achieves the desired dryness.

“We don't do anything special to the fruit. Friends and fans help me pick it, then we just cut it up. It's really cool and humbling.”

PHOTOS: JAMIE BOGNER



PHOTOS: TONY FITZGERALD

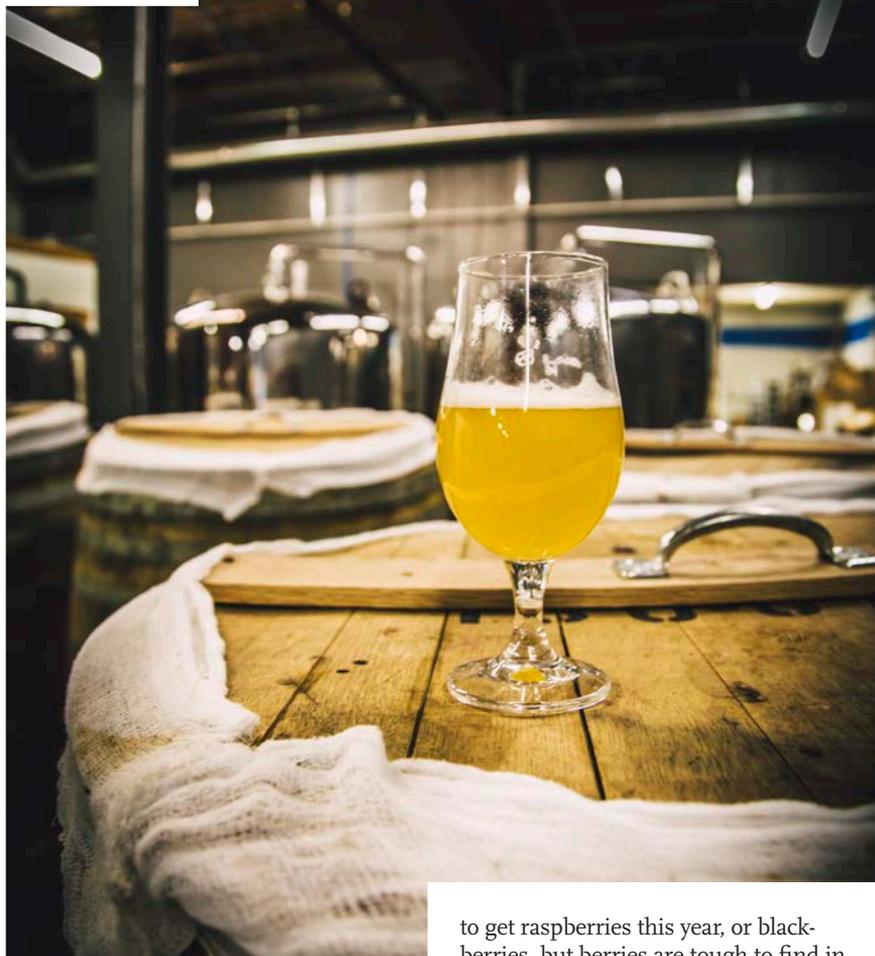
“Fruit Stand refermentation can be as quick as 4 weeks from fruit addition to packaging: 3 weeks on fruit, refermentation complete, then bottled next week,” Casey says. “My idea is to get a lot of fruit in and out pretty quickly.”

Change in the beer is rapid at this stage, with big leaps in flavor and clarity in only a few days.

“A week ago this Cherry Fruit Stand was cloudy and turbid, but once fermentation finished, everything rapidly settled out. We don’t filter but we do use strainers to keep fruit solids out. With 380 pounds of fruit in a 600-liter barrel, it’s going to be tough to get it all out. There’s always a lot of loss through the fruit, but [this method] makes the best beer so we’re okay with that loss. With this much fruit, we’ll probably lose 10–15 gallons of beer [to absorption by the fruit]. It’s not insignificant, but it’s worth it.”

One big point of experimentation with Casey has been the quantity of fruit he adds to the beer. The Fruit Stand series typically sees about pound and a half of fruit per gallon of beer, while the The Cut series, which is styled after more traditional Belgian-style sour fruit beers, sees about three pounds of fruit per gallon to balance the sour character. A newer series, the Casey Family Preserves, takes the same saison base as Fruit Stand and amps up the fruit to two or three pounds per gallon.

“Whereas Fruit Stand is supposed to be a saison first and a fruit beer second, this Preserves series is fruit-first and the base beer is almost an afterthought—it’s truly



like a [jarred] fruit preserve,” Casey says.

With the fruit focus comes a new set of challenges. When growing seasons in Colorado don’t cooperate, fruit becomes more scarce. But successful crops mean new levels of excitement.

“We haven’t had a successful apricot crop in Colorado since 2012, so people are really excited about my apricot beers,” Casey says. “We’ve done a lot of cherries this year because cherries are pretty easy to get in Colorado, but people always want that new thing. Peach is something people really like, and I’ve got a great barrel of Oak Theory set aside for peaches. I’m looking forward to getting going again on plums—it’s been eight months since we’ve done a plum beer. I’m really hoping

to get raspberries this year, or blackberries, but berries are tough to find in Colorado. I’m always calling farmers to introduce myself, telling them that if they grow any berries just freeze all they can, and I’ll buy every pound that they grow.”

By October 2015, when the last of that year’s beers were put into tanks, Casey had used 7.5 tons of Colorado-grown fruit in his beer for the year. That’s a big number for a brewery that’s open only one day per month and requires a two and a half hour drive from Denver for most patrons. And while Casey has more fruit frozen away to ensure some variety over the winter months, he’s also tuning in to the seasonal cycle and letting that influence his brewing and process. In the summer, the cellar stays a consistent 74°F (23°C). In the winter, he heats it to 60°F (16°C). For bottle conditioning, he uses a room at 68°F (20°C).

“Right now, we’re brewing with tweaks from learning a year ago. The seasonality is very different. Brewing Saison in April is faster than winter. When we started, we had twenty barrels for our farmhouse beers. We have sixty now. Growth is intentionally slow, but making more helps mitigate the risk of not having something to sell. So we can truly be putting out the best beer possible.”

The brewing and experimentation process has not been all smooth sailing. Early batches of Oak Theory had to be held until the diacetyl faded. Thankfully, with mixed-culture beers, *Brettanomyces* will clean that up if you give it time. Blackber-

“What’s fun about [my focus on Colorado ingredients] is that it’s not as simple as getting a purée from the Northwest. It’s talking to people... and connecting with them. Sometimes they don’t have an outlet for some of the varieties they grow, so me coming in and taking 400–500 pounds is significant. It’s pretty fun to see that mutual respect.”
—Troy Casey



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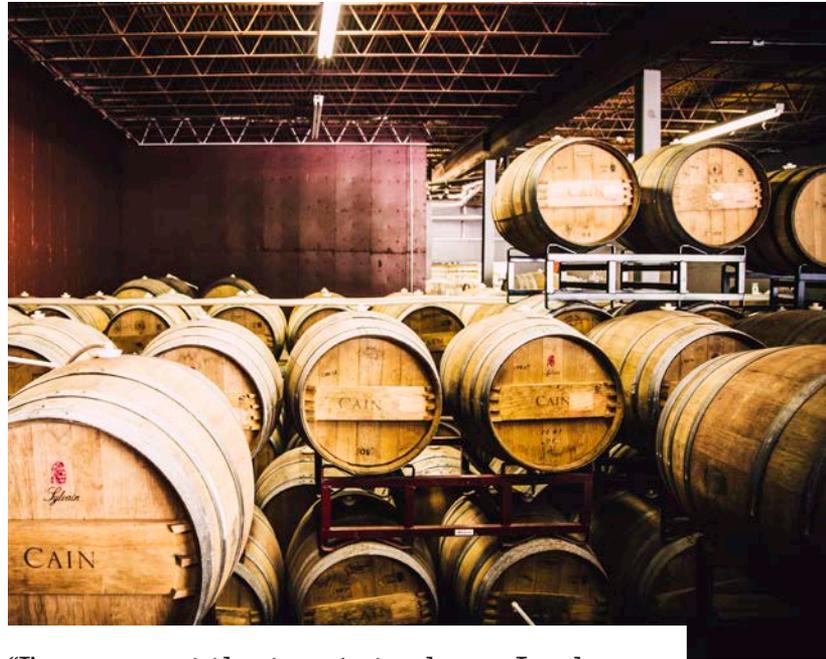
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The advertisement features a bright yellow background. At the top, four different styles of beer glasses are displayed, each with a small logo. Below the glasses, the text "Limited-Edition Craft Beer & Brewing Merch" is written in a large, bold, white font. To the right of this text is a small image of a dark baseball cap with a logo. Below the cap, the text "On sale now at shop.beerandbrewing.com" is written in a smaller, bold, black font. At the bottom of the advertisement, a person's torso is visible, wearing a dark t-shirt with a white graphic design featuring a hop cone, a flame, and two crossed spatulas.



“I’m now at that point where I ask myself ‘What would Vinnie do?’ If Vinnie [Cilurzo, of Russian River Brewing] wouldn’t release it, we hold onto longer.” —Troy Casey



ry Cut also had to wait a bit for release, for the same reason.

“I’m now at that point where I ask myself ‘What would Vinnie do?’ If Vinnie [Cilurzo, of Russian River Brewing] wouldn’t release it, we hold onto it longer.”

When he launched the business, Troy’s original plan was to sell as much beer at the brewery as possible, then sell the rest as close to home as possible. These days, more than 50 percent of the beer Casey makes is sold directly to customers on the one day per month he opens. Thanks to large crowds, he has resorted to an advanced ticketing method to ensure that those who make the trek from Denver, Salt Lake City, Santa Fe, and the like, don’t go home empty handed.

The limited nature of Casey’s beer has catapulted it into the beer-trading market, which is a mixed blessing.

“When I was at AC Golden, I used to trade a lot—not trading my beers, but trading other people’s beers. It’s fun—how else are you going to get to try Tree House or Trillium or Hill Farmstead or Russian River—there’s so much great beer around the country. I encourage people to do that. But it gets frustrating when it goes farther and people resell or raffle beer.”

“The only reason we’re talking about [reselling] is how personal beer is. If it were anything else, that’s just how business works. If it’s cars or shoes, the secondary market just is what it is. What’s tough with beer is that brewers put so much time and energy into it that we want consumers to buy it and enjoy it. When someone else is selling it at a mark up, it just cheapens what we’re trying to do.”

But the economy around the beer will always be second for Casey, as his main love is focusing on the creative expression in his beer.

“My goal is to be the Indiana Jones of fruit and find that perfect variety.”

PHOTOS: JAMIE BOGNER

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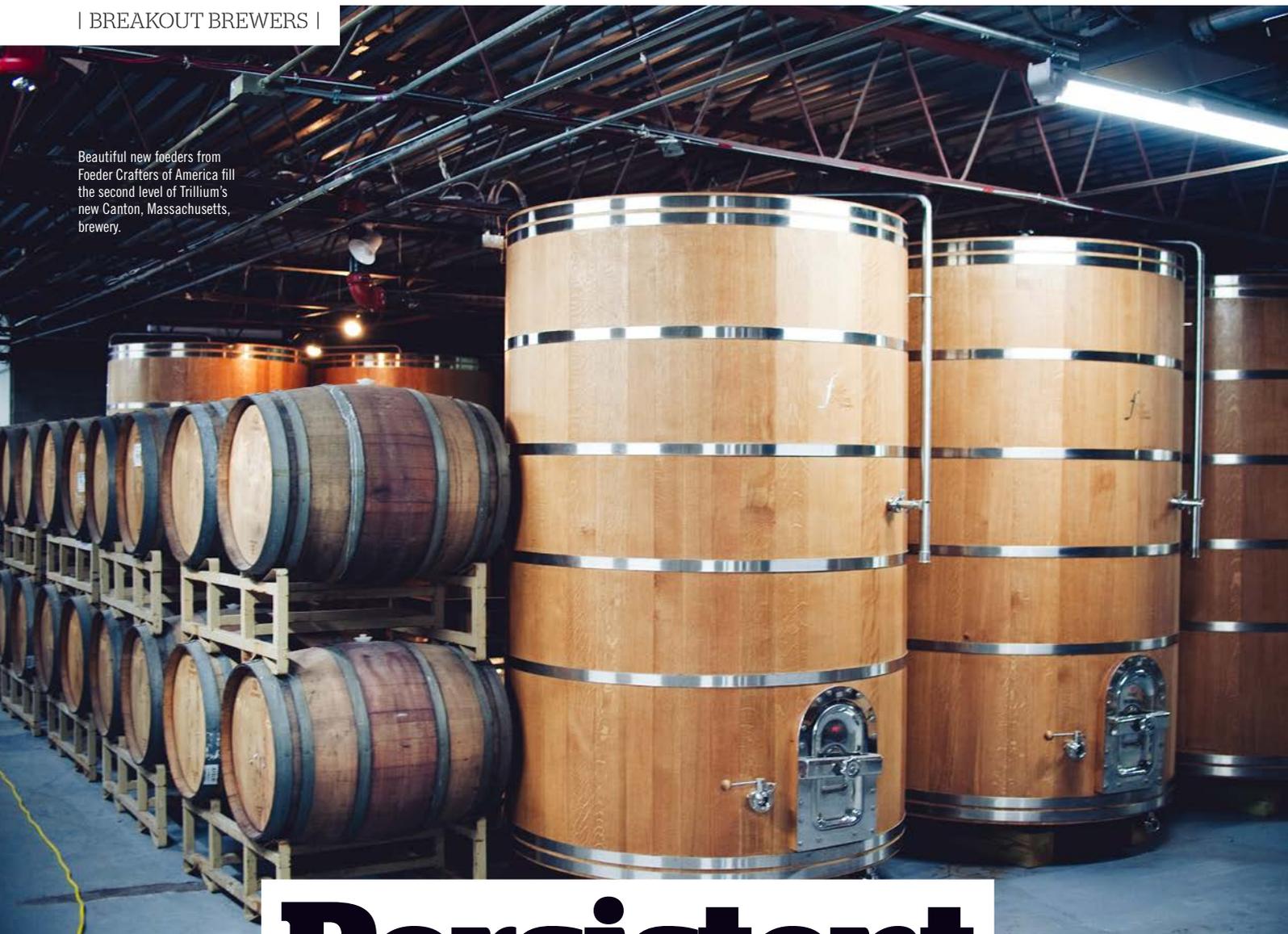
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Beautiful new foeders from Foeder Crafters of America fill the second level of Trillium's new Canton, Massachusetts, brewery.



The Persistent Experimenter

Jean-Claude Tetreault and his team at Boston's tiny **Trillium Brewing** have brewed 125 beers in their first two and a half years. Although many are variations on their core beers, they're not just quick, throw-them-together type beers. And many are among the most sought-after beers brewed in the Northeast. **By Norman Miller**

ON SATURDAY, IN THE Fort Point Channel neighborhood in Boston, it's not unusual to see a line of people outside the Trillium Brewing Company. They're waiting for their opportunity to get the latest release—an IPA, a pale ale, a sour, or a porter—from this tiny Congress Street brewery that does not distribute or even

offer samples. It's a sight that Cofounder and Brewmaster Jean-Claude Tetreault says he never imagined. "I'm still—I don't know if surprised is right—but I'm amazed people show up and wait for any of the beers we make. [But] that's why you make beer—so people enjoy it."

Trillium is a brewery that seemed to be in planning forever. Tetreault and his wife and partner, Esther, found the location at 369 Congress Street, in 2010. But licensing issues kept pushing the opening of the brewery, first to 2011 then 2012, and finally, they opened the small brewery in 2013.

Even then, it wasn't easy. The city of Boston would not let Trillium provide

PHOTOS: TYLER FITZPATRICK

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MAKE IT

Bees American Wild Ale

This recipe from Trillium Brewing's cofounder and brewmaster, Jean-Claude Tetreault, uses New England malt and honey. To give your version its own *terroir*, source your malt and honey locally.

ALL-GRAIN

Batch size: 5 gallons (19 liters)

Brewhouse efficiency: 65%

OG: 1.045

FG: 1.002

IBUs: 7

ABV: 5.6%

MALT/GRAIN BILL

5.5 lb (2.5 kg) Valley Malt Pale Malt

2.5 lb (1.13 kg) Valley Malted Wheat

8 oz (227 g) Valley Crystal Wheat

HOPS & ADDITIONS SCHEDULE

0.25 oz (7 g) U.S. Goldings hops at 60 minutes

1 lb (454 g) local raw New England wildflower honey in the fermentor at 4 weeks

8 oz (227 g) local raw New England honey for bottle priming

YEAST

Cultured up bottle dregs of Trillium New England Native Microbe Culture.

If Trillium doesn't distribute in your area, try a commercial mixed culture, or culture your own blend of backyard mystery microbes. The results won't be the same, but it's the best you can do without the actual Trillium strains.

Suggested commercial options include East Coast Yeast ECY01 BugFarm, ECY03 Farmhouse Blend, or ECY20 Bug-County; The Yeast Bay Amalgamation, Mélange, or Funktown; White Labs WLP655 Belgian Sour Mix I; Wyeast 3278 Belgian Lambic Blend or 3763 Roeselare Ale Blend.

DIRECTIONS

Single infusion mash the pale malt, malted wheat, and crystal malt in 2.75 gallons (10.4 liters) of water to arrive at 154°F (68°C). Sparge with 170–175°F (77–79°C) water to collect 5.5–6 gallons (20.8–22.7 liters) of wort. Bring to a boil and boil for 1 hour following the hops schedule. Cool to 68°F (20°C) and rack into a sanitized fermentor. Add the cultured microbes and aerate. Ferment at 68°F (20°C) for two days, then let the temperature rise to 75°F (24°C) for four weeks. At four weeks, add 1 pound (454 g) of honey. Ferment for an additional 4–8 weeks at ambient temperature. When the gravity is stable at 1.000–1.0002, blend the 8 ounces (227 g) of honey with 8 ounces (227 g) 100°F (38°C) water to ensure good mixing in bottling bucket. Bottle condition in heavy glass for 6–12 months.

BREWER'S NOTES

To achieve a water chemistry of about 150 ppm Ca⁺ and a balanced sulfate/chloride ratio, Tetreault adds 5g calcium chloride and 5g calcium sulfate to the mash water. Add brewing salts as needed to adjust your water chemistry.



samples of their beers—a routine practice for breweries, including the other two breweries in Boston—the Harpoon Brewery and Boston Beer Company. But Trillium persevered, and except for a licensing snafu that forced their closure for about a month in 2014, they have been going strong. Tetreault and his team have brewed 125 beers in their first two and a half years. And, they're not just quick, throw-them-together type beers. As of the writing of this article, Trillium had twenty-seven of the top 100 beers brewed in Massachusetts, according to Beeradvocate.com user reviews.

"A lot of those are variations on our core beers," says Tetreault. "We notice by changing a seemingly small aspect of one beer, it makes for a very distinct final product." For example, when brewing an established beer, such as the Fort Point Pale Ale, Tetreault says he likes to experiment with different hops to see how they change the beer. He says it's more than just throwing hops into a beer all willy-nilly.

"There's a lot of thought that goes into it," says Tetreault. "It's choosing when and how and the correct temperatures. It's a relatively detailed process to decide when you choose to pull the trigger on when you dry hop. It's based on the experience we've gained over time." That experience comes from the fact that they brew many different beers because they brew such small batches of beer that it sells out right away. "We sort of take a homebrewing approach in that you're almost making a different beer every time you brew," he says.

Many of Trillium's beers are hazy, something that Tetreault says was not the original intention, but beer fans have really taken to it. "A combination of yeast and technique makes them appear the way they do," he says.

Although Trillium (named for a flower that grows in temperate locations) brews many different styles, the brewery is best known for its IPAs, which are among the most sought-after beers brewed in the Northeast. They include a series of beers named for surrounding streets (e.g., Congress Street IPA, Sleeper Street IPA, and Melcher Street IPA) as well as the Uppercase IPA and Mettle double IPA. Many of these have various versions brewed

PHOTOS: TYLER FITZPATRICK



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“It was impossible for us to do what we wanted—[the Fort Point location is] such a tiny little spot. Before, we’d put out a wild beer that took us two years to brew, and it would be gone in an hour and a half.”

—J. C. Tetreault



with different hops. There is also the Fort Point Pale Ale that is hoppier than many packaged IPAs today.

Also popular is Artaic, a quick-selling double IPA. “Artaic has really taken off for us,” says Tetreault. “It’s hopped with 100 percent Mosaic hops and brewed with local wildflower honey, which really complements the Mosaic character.”

Trillium does brew other popular beers, including Night & Day, an imperial stout brewed with a wort that is mashed twice and brewed with locally roasted coffee, and its sister beer—Day & Night, a barley-wine. Another popular beer is the Stonington, a saison brewed with 100 percent New England malt and fermented with wild yeast captured from grapes where Jean-Claude and Esther were married in 2009. The Pot & Kettle is a classic porter.

Given all of Trillium’s hoppy beers, some may be surprised by which breweries inspire Tetreault. “I always say Jolly Pumpkin [Michigan]. That’s a true American farmhouse brewery. Their entire portfolio is pretty incredible. Cantillon

[Belgium]—I went there on a business trip. It’s a truly special place. I’d say Allagash Brewing [Maine] is a local example of something I want to do.”

To achieve that vision, Trillium has undergone a major change. At the end of 2015, Trillium opened a second brewery at 110 Shawmut Road, Canton. The Fort Point brewery’s retail area is only 350 square feet. The new brewery has 4,000 square feet. At the Canton location, they will be able to brew more than three times as much beer in their first year than they can at the Fort Point location—going from 2,500 barrels to 10,000+ barrels in 2016. The new brewery has the potential to brew up to 35,000 barrels of beer a year.

The Canton location will brew all of the currently popular beers as well as other beers; that will free up Fort Point for something Tetreault is really excited about. “The Fort Point location is best geared to small batch, barrel-aged stuff. We’re going to make sure to invest in a barrel program and a wild program.”

The original Trillium will have hundreds of barrels to use to brew various wild and other barrel-aged beers, and they will have one of the larger barrel-aging programs in all of New England, Tetreault says. “It was impossible for us to do what we wanted—it’s such a tiny little spot,” he says. “Before, we’d put out a wild beer that took us two years to brew, and it would be gone in an hour and a half.”

The two locations have different feels. While the Boston brewery is tiny and tight with no samples and an in-and-out experience, the new location will have a large tasting room that has enough space for private events. “The tasting room is open to the brewery, so you really get to hear and smell what a brewery is like,” Tetreault says. There will also be samples and tours. The new location will also let them begin distributing beer for the first time—both bottles and draft.

Despite the attention drawn by the new Canton location, there are those who have adopted Trillium as their neighborhood brewery in Boston and enjoy going there every week to fill their growlers or get their hands on the latest brewery release. “We’re not phasing out the Fort Point location,” says Tetreault. “We will supply ourselves from Canton, and hopefully we’ll have more beer at Fort Point, and it’ll last longer. We’re going to continue to be a Boston brewery.”

PHOTOS: TYLER FITZPATRICK

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From Grain To Glass

Bell's Brewery Director of Operations **John Mallett** is known for his precision, focus on process, and undying love of malt (he wrote the book on the subject). But the beers he prizes most are beers that showcase a true and honest expression of the ingredients themselves, whether that's malt-forward beers that taste like the fields of barley they come from, lambics that showcase the incredible interplay of yeast, bacteria, fruit, and wort, or hoppy beers that convey the care with which the hops themselves are selected. **By Jamie Bogner**

“I'M NOT GOING TO SAY ORVAL

because I think probably every brewer in the world says Orval, but it's a magnificent beer.”

John Mallett is a consummate brewer's brewer, and his focus on getting it right extends to the exact phrasing he uses to describe beers. Throughout our conversation, he often backed up, rethought, and restated his opinion, so it expressed the exact sentiment he intended to convey. This same attention to detail is evident in the beer he brews at the legendary Bell's Brewery (Kalamazoo, Michigan), and it's the same standard he seeks out in the beer he drinks.

Sierra Nevada Pale Ale

Sierra Nevada Brewing Company
(Chico, California)

You don't even need to say anything more than the name. This beer is just technically awesome. Such a great focus on quality. The people, the place, the beer, the intent, the stewardship—all of it is right there. The first time I had it was a long time ago—it would have been in Boston where I worked retail in a liquor store on Beacon Hill. That beer came in—this was probably 1987—and it was bright. My memory is somewhat dim—I didn't really know what I was doing tasting beer back then. But in all the years since, if I'm out and I see that beer on, I always think, “That's going to be a good drinking beer.”

Lagerbier Hell

Augustiner Bräu
(Munich, Germany)

Augustiner Bräu is an old-school Munich brewery, and the beer has just an incredible malt presence. Crushable—it's just so easy drinking. I think about that beer as being transparent back to the farmer's field, down to the barley used to make the malt. Those varieties are really old varieties. And there's something about this beer that just pulls it together. Really nice hops and malt selections allow it to shine through the beer. It's almost like the

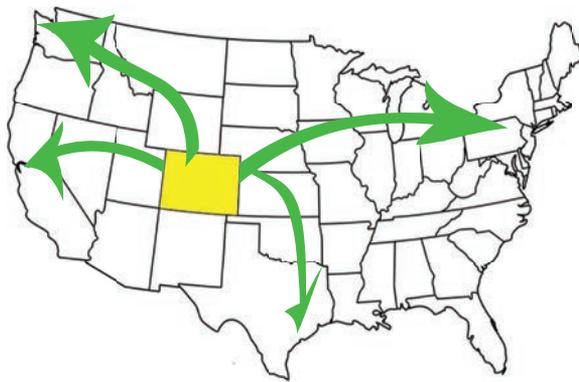


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brewer becomes invisible and the beer is a reflection of the fields.

Of beers that are like it, I'd say that Schönramer or Keesmann Herren Pils—these are beers that are just beautiful, pure representations of German Agriculture. I was in Bamberg a month or two ago, and we spent a night in a bar there drinking Herren Pils, and it was just... so good. I love that beer—it's the beer I go back to Bamberg for.

But we're talking about Augustiner. The stewardship they have from contracting with the same farmers to malting the barley in the brewery all the way through to getting it to the pubs, that's the "grain-to-glass" that helps make that beer great.

Drie Fonteinen Schaerbeekse Kriek

**Brouwerij Drie Fonteinen
(Beersel, Belgium)**

Beer is such a complement to food, and I love to drink this one with food. The combination of the fruit and the acidity—I've had some really memorable meals where they've just sung together. As you drink this beer, it has both a richness and also the ability to clear the palate. It harmonizes so well with Flemish food, which I love. The beer is super solid, Armand is a great guy, and when you pour it in the glass, it's like magic. I've had a few memorable meals with great people in great conditions. I love how Armand has such a turn of phrase, where he's describing the incredible artistry that brewing a beer of that nature involves. My experience of the beer is informed by the experience of the company present. We know that aroma and memory are incred-

ibly closely linked, and that beer lights up that neural pathway for me.

Odell IPA

**Odell Brewing Company
(Fort Collins, Colorado)**

I love the brilliant pop of hops. The hops just scream forth, and they are forceful, and yet you can tell that they're carefully chosen, so it's quality over quantity, and the quantity is considerable. The hops notes are so bright. With hops, I taste the picking window—the time when the hops are harvested has a lot to do with the beer in the glass—and the hops for Odell IPA are obviously well selected. The timing of the hops-picking window is evident in that beer. The malt is balanced—it's not the star, but you need that supporting cast. The hops are the star, and it's evident that the malt bill itself marries well with the hops direction. Anyone can brew a hops bomb. Balancing the malt is the non-obvious key to a fantastic IPA.

Staghorn Octoberfest

**New Glarus Brewing Company
(New Glarus, Wisconsin)**

This style should be about malt, and this beer is all about malt. Dan and Deb Carey have built a magnificent brewery that is really devoted to refining the brewer's art to a very fine degree. Like many great brewers, Dan focuses on raw materials—on the ingredients that provide the essence of the beer. Sourcing, brewing execution, and attention to the minutiae of running the brewery come through in that beer. He has an intense focus. It's a great pleasure to sit and talk with him

because he's very humble, very smart, and knows exactly what he wants to get out of a beer. He knows how to make great beer. A brewing-school friend of mine who worked with Dan at one point mentioned that if God had any questions about brewing beer, God would call Dan. The beer itself is malt-forward with herbal, slightly spicy hops married with excellent yeast aroma. You can tell that the yeast is well-treated there. Happy yeast.

Saison Brett

**Boulevard Brewing Company
(Kansas City, Missouri)**

I would never have guessed that Kansas City is located in the Belgian countryside, but a quick taste of Saison Brett makes me think that my geography is off. The dry, spritzzy, spicy, and phenolic attributes all work together to make an amazingly well balanced and distinctively drinkable beer. I once remarked to Steven Pauwels (the mastermind behind this awesome brew) that I don't generally like hops-forward, yeast-driven Belgian-style ales; that the bitterness and phenols are in conflict and just don't work well for me. Like in Orval, the secret to this beer lies in the contribution that *Brettanomyces* releases. In short, this beautiful beer is the nuanced exception that proves the rule.

Honorable Mention

Beers that were close but that just missed my list include Brasserie de La Senne Taras Boulba (Brussels, Belgium). It's so light, so refined—it just sings. And there are some really phenomenal Weisse beers out there. If I had a little more room in my six-pack, those would be next.

As I was thinking about this list, there are a number of beers I would drink on draft, but I can't put them in a six-pack, and I think of some of them as being very ephemeral, like some of the British beers that you drink in a time and space where it's perfect, and yet you think, "This is great right now, and I don't know that it could ever be always this great." You taste a level of freshness in that moment that's very yeast-driven, and as a brewer, I look at that and think, "I know it's going to change. I can't transport this away from here. It's good tonight, and I need to drink it tonight so I'm going to drink a bunch of it tonight."

Packaging great beer is really hard. Take a British beer such as Timothy Taylor's Landlord—a really beautiful, estery, perfect kind of thing that's all dependent on time and place. But if you take Orval, that beer is changing in the bottle. And in many ways, Orval gets better as it's bottled. That to me is genius. So because it's changing and that Brett character is coming up, it's changing in a positive way.



PHOTO: JAMIE BOGNER

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Rosemary Applesauce





Potted Smoked Trout

A
Taste
For

Sour

The wide range of flavor, intensity, and acidity makes sour beers ideal partners in the kitchen, and these recipes explore and demonstrate that range in everything from appetizers to dessert.

Recipes and Photography by Christopher Cina



Duck Prosciutto with Dried Fig Chutney

Active preparation time: 30 minutes
Total time: 7 days
Serves: 6–8

3 cup kosher salt
 2 Tbs fresh cracked black pepper
 2 Tbs dried oregano
 1 Tbs crushed red pepper
 2 large duck breasts (Magret are best)

Combine the first four ingredients. Pack both duck breasts in this salt mixture, cover, and refrigerate for 24 hours.

Remove the duck breasts from the salt and rinse them under cold water. Pat dry and wrap in cheesecloth. Tie with butcher's twine and hang in a cool, dark place for 6 full days (a refrigerator works well, too).

Remove the duck prosciutto from the cheesecloth, thinly slice it, and serve it with Dried Fig Chutney.

Dried Fig Chutney

1½ cup (12 fl oz/355 ml) sour beer
 2 cup dried figs, sliced
 ½ cup sugar
 1 cinnamon stick
 3 strips orange zest
 Freshly ground black pepper

Combine the first five ingredients in a medium saucepan and bring to a boil. Reduce the heat to low and simmer for 20 minutes. Remove from the heat and allow to cool to room temperature.

Discard the orange zest and cinnamon stick. Season to taste with the black pepper. Refrigerate until ready to serve.

Beer Suggestions: Drie Fonteinen Oude Gueuze (Lembeek, Belgium), Cantillon Classic Gueuze (Brussels, Belgium), Lindemans Oude Gueuze Cuvée René (Vlezenbeek, Belgium)



Pork T-Bone with Tart Rosemary Applesauce

Active preparation time: 20 minutes
Total time: 1 hour
Serves: 2

1 Tbs garlic, minced
 ¼ cup (2 fl oz/59 ml) olive oil
 Two 10 oz (283 g) pork T-bones

3 cup (24 fl oz/710 ml) sour beer
 1 cup (8 fl oz/237 ml) water
 ¼ cup sugar
 1 bay leaf
 2 rosemary sprigs
 6 Granny Smith apples, peeled, cored, and sliced
 Salt and pepper

In a resealable bag, combine the garlic and olive oil. Add the pork T-bones, seal the bag, and marinate for 30 minutes.

While the pork marinates, combine the beer, water, sugar, bay leaf, and rosemary in a medium saucepan and bring to a boil. Add the apple slices and cover with a lid.

Simmer for 30–40 minutes, until the apples break apart. Drain the liquid, reserving ¼ cup (2 fl oz/59 ml) to adjust the consistency of the sauce. Remove the rosemary and bay leaf. Whisk the applesauce until the apples are mashed tender.

Preheat the grill to high. Remove the pork T-bones from the marinade and grill them on high to your desired degree of doneness (an internal temperature of 145°F/63°C for medium rare, 160°F/71°C for medium). Season to taste with salt and pepper. Serve with the applesauce.

Beer Suggestions: Russian River Temptation (Santa Rosa, California), Allagash Coolship Resurgam (Portland, Maine), The Rare Barrel Forces Unseen (Berkeley, California)



Salt-Roasted Beet Carpaccio with Sour Beer Gastrique

Active preparation time: 30 minutes
Total time: 2 hours
Serves: 3–4

10–12 egg whites
 6 cup kosher salt
 2 large beets, trimmed and washed
 ½ cup walnuts
 1 cup mascarpone cheese
 6 slices fresh baguette, toasted
 1 Tbs capers
 Freshly ground black pepper

Preheat the oven to 425°F (218°C). Combine the egg whites and salt and mix well. The mixture should resemble wet sand.

Layer a thin amount of the salt mixture in the bottom of a baking dish with high sides. Place the beets in the baking dish and cover with the remaining salt. Bake for 90 minutes.

Combine the walnuts and mascarpone.

Remove the beets from the oven and let them to cool to room temperature. Peel the beets, slice them thinly, and arrange them on a plate. Slather the mascarpone on the toasted baguette slices. Garnish the beets with the capers, black pepper, and Sour Beer Gastrique.

Sour Beer Gastrique

2 Tbs shallots, minced
 2 cup (16 fl oz/473 ml) sour beer
 2 Tbs (1 fl oz/30 ml) agave syrup
 2 tsp champagne vinegar
 Kosher salt

In a small saucepan over medium heat, combine the shallots, beer, agave syrup, and vinegar. Bring to a boil, then reduce the heat and simmer until the mixture is reduced to a thick syrup. Remove from the heat, season lightly with salt, and cool to room temperature for serving.

Beer Suggestions: New Belgium La Folie (Fort Collins, Colorado)



Duck Prosciutto with
Dried Fig Chutney



Salt-Roasted Beet Carpaccio
with Sour Beer Gastrique



Chocolate Chile
Cherry Pot de Creme

Chocolate Chile Cherry Pot de Creme

Active preparation time: 30 minutes

Total time: 2½ hours

Serves: 6

- 9 oz (255 g) semisweet chocolate chips
- ¼ tsp cayenne pepper
- 1 cup (8 fl oz/237 ml) whole milk
- ½ cup (4 fl oz/118 ml) cherry lambic
- 1½ cup (12 fl oz/355 ml) heavy cream
- 8 egg yolks (reserve the egg whites for another use)
- ¼ cup sugar
- ¼ tsp salt
- Confectioners' sugar for garnish
- Whipped cream for garnish

Place the chocolate chips and cayenne pepper in a stainless steel mixing bowl.

Combine the milk, beer, cream, egg yolks, sugar, and salt in a medium saucepan over medium heat. Stirring constantly, cook until the mixture begins to thicken, coating the spoon. Add the mixture to the chocolate chips and cayenne pepper in the mixing bowl and stir until the chocolate melts. Pour the mixture into 6 oz (177 ml) ramekins and refrigerate for 2 hours. Serve with confectioners' sugar and whipped cream.

Beer Suggestions: Perennial Artisan Ales La Boheme (St. Louis, Missouri), Odell Friek (Fort Collins, Colorado)



Potted Smoked Trout

Active preparation time: 10 minutes

Total time: 15 minutes

Serves: 12

- 1 lb (454 g) smoked trout, trimmed, skin removed
- 3 Tbs (1½ fl oz/45 ml) sour beer

- ½ lb (227 g/2 sticks) butter, very soft
- ¼ cup capers, chopped
- ¼ cup shallots, minced fine
- ¼ cup chives, minced fine
- Salt
- Fresh cracked black pepper

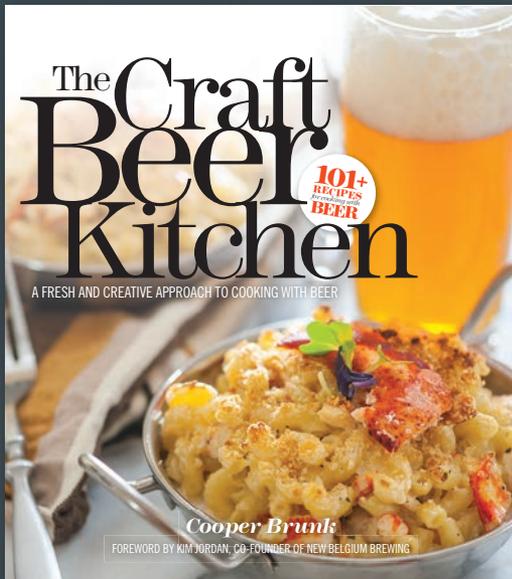
In a blender or food processor, puree the smoked trout, sour beer, and butter. Remove the mixture to a bowl and fold in the capers, shallots, and chives. Season to taste with salt and pepper.

Portion the mixture into 4 fl oz (118 ml) Mason jars. Refrigerate.

Remove from the refrigerator about 1 hour before serving. Serve with crackers, crostini, or crusty bread.

Beer Suggestions: The Bruery Rueuze (Placentia, California), Crooked Stave Flor D'Lees (Denver, Colorado), Firestone Walker Sour Opal (Paso Robles, California)

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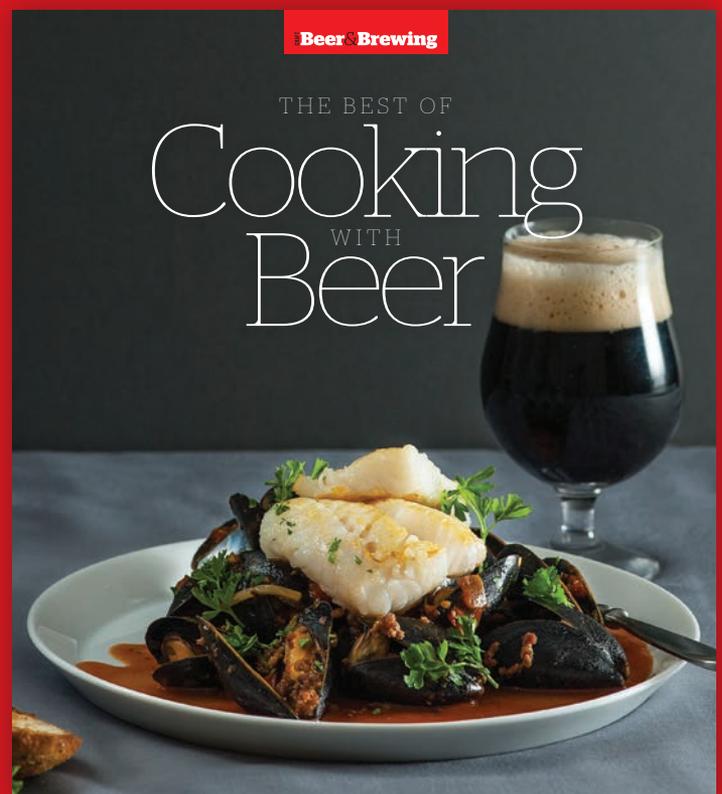


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Don't Age These Beers!

When determining whether to age or not to age a beer, watch out for these four cellar no-nos. **By Patrick Dawson**

RESPECT YOUR ELDER: KEEP COLD, DRINK FRESH, DO NOT AGE! Vinnie Cilurzo, co-owner and brewmaster at Russian River Brewing Company (Santa Rosa, California), plastered this (and many similar) warnings on the label of his double IPA, Pliny the Elder. They all center on the fact that he empathically discourages people from aging this beer. And he has a point, as one of the key events to occur in an aging beer is the fading of hops taste, aroma, and bitterness, something that's rather detrimental to such beers as double IPAs.

And the fact of the matter is that while cellaring is rapidly gaining in popularity and can do incredible things for the right beer, the vast majority of beer on the market has no business being aged. Most don't meet the prerequisites to survive a turn in the cellar without going stale, and even more bear qualities that are best enjoyed fresh and will only become muted over time.

When it comes to the prerequisites, the beer needs to possess one of the following three characteristics: strong, sour, or smoked. The high ABV, acidity, and smoke phenols act as preser-

vatives that slow the aging of beer. And when a beer becomes too old, it loses its vibrancy and takes on stale flavors.

But the lack of a strong, sour, or smoked "preservative" isn't the only reason to drink a beer fresh. When determining whether to age or not to age, watch out for these other cellar no-nos.

Hops-Forward Beers

As I mentioned above, the bitterness, aroma, and taste that you get from hops will slowly fade over time. Some aspects are more sensitive than others. For instance, the flavors derived from myrcene (which gives beer that distinctive green "hoppy" flavor) and humulene (spicy and herbal) are especially fleeting. On the other hand, the hops compounds partially responsible for "juicy" flavors found in new school IPAs, such as linalool (floral-citrusy) and geraniol (floral-rose, geranium), are longer lasting, but not in the long-term cellaring sense. And as hops bitterness diminishes, beers are often left tasting overly sweet, lacking that necessary contrasting aspect.

With the hoppiness gone, beers such as IPAs, double IPAs, and even at times



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Unleash Your Flavor

Esters are often formed during primary fermentation and help to give beer its characteristic taste, such as the banana presence in German Weiss beers or the pear and tree-fruit aspects in Belgian ales. Over time, most of these esters are broken down in a process called hydrolysis, causing the flavor to slowly fade... In many beers, this bright, fruit component is key and allowing it to fade via cellaring causes a beer to become a shell of its former self.



American barleywines are often left seemingly incomplete because the brewer constructed the flavor profile with hops as the centerpiece. Compounding the issue, as the hops recede, studies have shown that many of their initial flavors transform into trans-2-nonenal, the compound primarily responsible for stale, papery flavors in old beer. So, not only are these beers losing a critical component of what makes them special, they are gaining a decidedly negative aspect as well.

Fresh-Ester Degradation

The fruity smell and taste you encounter in beer often comes from chemical compounds called *esters*. There is a huge spectrum of esters found in beer, ranging from isoamyl acetate (banana) to ethyl hexanoate (apple) to ethyl butyrate (tropical fruits), with many others in between.

Esters are often formed during primary fermentation and help to give beer its characteristic taste, such as the banana presence in German Weiss beers or the pear and tree-fruit aspects in Belgian ales. Over time, most of these esters are broken down in a process called hydrolysis, causing the flavor to slowly fade. Generally, other esters will be created in their place, but they typically have a wine-like or port-like flavor.

So, if you're considering aging a beer that has a strong fruity presence when young, be aware that those flavors will most likely dull over time. In many beers, this bright, fruit component is key and allowing it to fade via cellaring causes a beer to become a shell of its former self.

Wheat Clearing

In unfiltered beers made with wheat, one of the most attractive features is the full, chewy mouthfeel that comes from suspended wheat proteins. Anybody who's had an authentic Belgian wit straight from the source can attest to the difference this makes.

However, those wheat proteins don't like to stay suspended in a beer and over time will slowly drop out and form a sediment cake on the bottom. Just as when hops disappear from an IPA, once a wheat beer's full mouthfeel dies off, it loses much of what once made it great. This is especially true when aging saisons with a strong wheat component.

Something else to be wary of when it comes to aging wheat-based beers is the fact that wheat malts are typically high in lipids. Given long enough, lipids can lead to, you guessed it, the dreaded stale, cardboard-like oxidative flavors.

Gueuze and other lambic-based beers, whose grain bills are up to 40 percent wheat, are among the few exceptions to cellaring wheat beers. These beers, which are swimming with the oxygen-scavenging wild yeast, *Brettanomyces*, aren't very susceptible to oxidation and can avoid the cardboard pitfalls associated with old wheat beers. (Not only that, but they're prized for their dry, champagne-like body and aren't expected to have a full body.)

Twist-Off or Swing-Top Oxygen Seepage

Compared to the typical "pry-off" caps, twist-offs have an inferior seal that, with age, will slowly allow oxygen to seep into a beer, speeding the aging process and causing (drumroll...) stale flavors! Luckily though, twist-off caps are pretty much a thing of the past in the craft-beer world. But it is something to keep in mind when debating whether to age a vintage twist-off bottle any further. Probably more importantly, be wary of swing tops, as the material used in their rubber gaskets is especially susceptible to oxygen seepage over time.

While some beers just beg to be aged, every beer has an optimal drinking window, and for the majority of cases, it's "as fresh as possible." Know which beers are going to benefit from maturation time and which will not. After all, an IPA is too beautiful a thing to waste.



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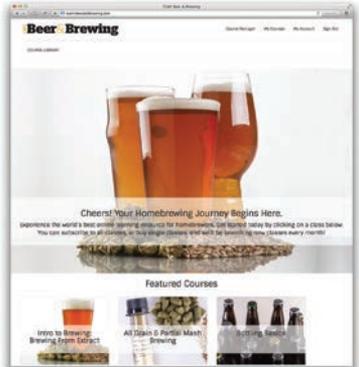


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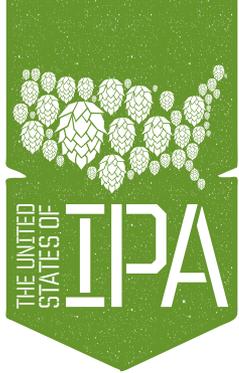
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It's been two years since we last turned our focus to the most popular craft-beer style in America, and in that short time, the landscape has grown increasingly diverse. The bitterness arms race is dead, and brewers have blown apart the "West Coast/East Coast" dichotomy of old, while entirely new genres of dank, hazy, fruity, and pale IPAs (and the new flavorful hops varieties that fuel them) redefine expectations of the style. Join us as we explore every corner of...

THE UNITED STATES OF **IPA**





THE IPAS OF CALIFORNIA

The bright, bitter, and aromatic India pale ales of California sparked an infatuation with hops that emanated across the craft-beer landscape and developed into the modern IPA style. **By John Verive**

WHILE THE INDIA PALE Ale wasn't born in California, it *was* reinvented in the Golden State. From Anchor Brewing to New Albion Brewing Co. to Sierra Nevada, the first generation of modern craft brewers found a niche adapting the strong, hoppy British pale ales into a streamlined vehicle for delivering the essence of New World hops. Brewers simplified the malt bills, experimented with diverse hops varieties, and created new processes and equipment for imbuing brews with hops character. These bright, bitter, and aromatic ales sparked an infatuation with hops that emanated across the craft-beer landscape and developed into the modern IPA style.

Understated Malt, New Hops

The rise of the IPA (an offshoot of the American pale ale style) to craft-beer prominence began forty years ago. In 1975, Anchor Brewing was struggling against the tide of American Light Lager and determined to keep their novel brewing techniques and unique ales flowing. They had introduced Anchor Porter in 1973 and wanted to follow that beer up with an American take on a British pale ale to commemorate the 200th anniversary of Paul Revere's Ride. "We learned about the Cascade hops variety from a hops-grower friend," says Anchor's veteran Brewmaster Mark Carpenter. "It was a new hops at the time, and no one was really using it as an aroma hops."

Anchor's iconoclastic owner, Fritz May-

tag, paired that pungent new hops variety with dry-hopping techniques he adapted from those learned during a research trip to England—Carpenter says that at the time, Anchor was the only American brewery to dry hop their ales. The distinctive Cascade character was underlined with an understated malt flavor, and Liberty Ale would unexpectedly become a template for the first modern craft beers. But it wasn't an instant success.

"At the time, people said you just couldn't drink it. There were just too many hops in it," Carpenter recalls. With forty years of brewing experience at Anchor, Carpenter has a unique perspective on how tastes have changed in America and the world. "I never would have guessed IPAs would become such a driving force," he says. "When you have brewers in Munich making California-style IPAs, the brewing world is upside down. That all traces back to Liberty Ale."

Higher and Bolder

By the mid-nineties, California craft brewers had begun to explore the IPA style and started what Carpenter calls "the chili cook-off effect" of ever-climbing IBUs and ever-bolder aromas. Relatively close prox-

imity to the hops fields in Washington and Oregon meant access to new hops varieties that fueled creativity, and in San Diego new breweries such as Stone, AleSmith, and the Pizza Port brewpubs focused on experimentation with hops. Slowly, a regional variation of the IPA style began to emerge.

"Over the years," says Stone Brewmaster Mitch Steele, "the West Coast IPA evolved to be a very pale golden color with a very dry finish and overwhelming hops intensity." Simple grain bills with little crystal malt in the recipes became the standard. "Balance?" Steele says, "We forget that side of the equation to maximize hops character." Clean fermentations further accentuated the hops, and an emphasis on dry hopping helps tease subtle flavors and aromas from all those hops.

While the early West Coast IPAs centered on the "C hops" varieties—Cascade, Chinook, Columbus, and Centennial—as more IPAs hit the market, the competition drove brewers to find ways to differentiate their brands. With a limited palette of hops varieties and a style that required a muted malt flavor, brewers stood out from the crowd by tuning their techniques.

"The temperature of dry hopping is where a lot of breweries are doing different things," Steele says. "It has a big impact on what flavors you'll get out of the hops." After much experimentation and study, Stone now dry hops beer at about 60°F (15°C) to maximize the extraction of hops oils, but Steele says all the mechanics of dry hopping still aren't well understood.

It's difficult in a production brewery setting to conduct the kind of controlled experimentation that science demands, and with few laboratories studying hops, the brewpubs around San Diego become the next proving ground for IPA development. During the 1990s and early 2000s, the West Coast style was further refined by a cadre of brewers including Stone's Steve Wagner, Tomme Arthur from Pizza Port (and later The Lost Abbey) and Vinnie Cilurzo—who brewed at the Blind Pig Alehouse in Temecula before moving north to found Russian River Brewing.

"Tomme Arthur and Jeff Bagby [Pizza Port] are two brewers with the biggest influence on how I structure IPAs," says Julian Shrago, the co-owner and brewer at the celebrated Beachwood Brewing brewpub in Long Beach. Beachwood is known for offer-



"Balance? We forget that side of the equation to maximize hops character."

— Mitch Steele, Stone Brewing



ing a wide variety of West Coast IPAs, and Shrago has a knack for making small subtle tweaks to grain bills and hops schedules to create dozens of distinctive IPA recipes. Arthur taught him to eschew caramel malt, even in double IPA formulation, and from Bagby he learned to amalgamate different hops flavors and specific dry-hopping techniques. “Bagby is a master of hoppy styles. I never would have dry hopped in the serving tank if it weren’t for him,” Shrago says.

Besides the serving-tank hops additions, which can use either whole flower or pellets depending on the specific character he’s looking for, Shrago has also adopted another technique he learned from Bagby and Vinnie Cilurzo: mash hopping. “The chemistry works a little differently in hops added during the mash, so you’re permanently locking in different

flavor and aroma components as opposed to throwing things in the boil [or dry hopping],” he says. “I firmly believe in having a wall of flavor and aroma, and I think the way that you do that is by adding different varieties of hops at many, many different points. Just tons of layers.”

A Firestorm of Interest

As brewers devised new techniques and technologies for extracting flavor and aroma compounds from hops, the hops growers bred new varieties that offered yet more diverse flavors and aromas. “Having a relationship with your farmer is a real

key to making great beer,” says Matt Brynildson, decorated brewmaster at Firestone Walker Brewery. In recent years, Brynildson has spent time exploring Germany’s

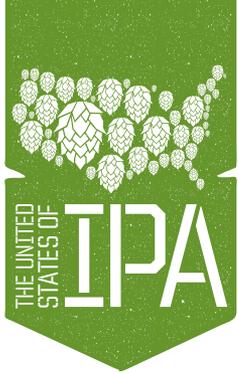
Freshness Obsession

One by-product of the growth of popularity of IPAs is beer fans’ obsession with IPAs being fresh. Often, John Kimmich, owner/brewer of The Alchemist in Waterbury, Vermont, says, he’ll read Internet posts from people claiming that Heady Topper or other IPAs begin losing their hops character after a couple of weeks.

That, Kimmich says, is just not true. “People are taking it in the wrong direction,” he says. “There is absolutely such a thing as being **too fresh**. For my taste, when we can any of my beers, if I drink it at home that night, I don’t like it. Every time a beer goes from one container to another, it needs time to acclimate; it needs time to become what it is. When people go to a store and see a can that was literally packaged hours ago, they feel compelled to drink it right away. You don’t have to. It will stay amazing for months and months, if not years. That the hops flavors drop off in a couple of weeks is not true—if a beer is brewed with the utmost care and kept refrigerated. [Yes,] it will age, and it will change. There’s a real need to educate our customers about that.”



PHOTO: MATT GRAVES



“Having a relationship with your farmer is a real key to making great beer. IPA has a lot of life still, and there are a lot of hops flavors and aromas yet to be explored.”

— Matt Brynildson, Firestone Walker

hops yards for new varieties, and Firestone Walker has released two new IPAs centered on emerging German cultivars, including Hüll Melon and Mandarin Bavaria. “IPA has a lot of life still, and there are a lot of hops flavors and aromas yet to be explored,” Brynildson says.

One man at the forefront of that exploration is Sierra Nevada Brewing’s Tom Nielsen. The technical lead for flavor and raw materials at the brewery, Nielsen studies,

analyzes, and tests every aspect of flavor in beer. Sierra Nevada is a huge consumer of hops, and Nielsen has championed many of the experimental varieties that have gained cult status among IPA geeks. He goes beyond the sensory side of hops selection and also looks at the chemical compounds that give each cultivar its distinct character. He knows there are a lot of flavors still to uncover, and he doesn’t see the popularity of IPAs flagging anytime soon.

“Today there’s a firestorm of interest in IPA—it’s very contagious,” Nielsen says. “People aren’t looking for their new favorite band anymore; they’re looking for their favorite brewery and favorite IPA. In this market, you really have to set yourself apart.”

Sierra Nevada Brewing’s spirit of innovation is instilled into their beer, and a near endless parade of unnamed experimental hops varieties get tested in the brewhouse every year. “We’re using experimental hops in a lot of our new product development,” Nielsen says, and besides the tropical and earthy flavors that have defined the West Coast style in recent years, he’s really excited about new flavors beginning to emerge from the hops yards of Yakima, Washington, and he works closely with growers to breed new cultivars that may lead to all new flavor profiles.

“You have to know what to look for,” he says. “You have to figure out what the chemistry is that’s

producing these aromas, then set up breeding designed to find varieties that carry those compounds.” He’s currently hunting for woody varieties with cedar, vanilla, and coconut aromas.

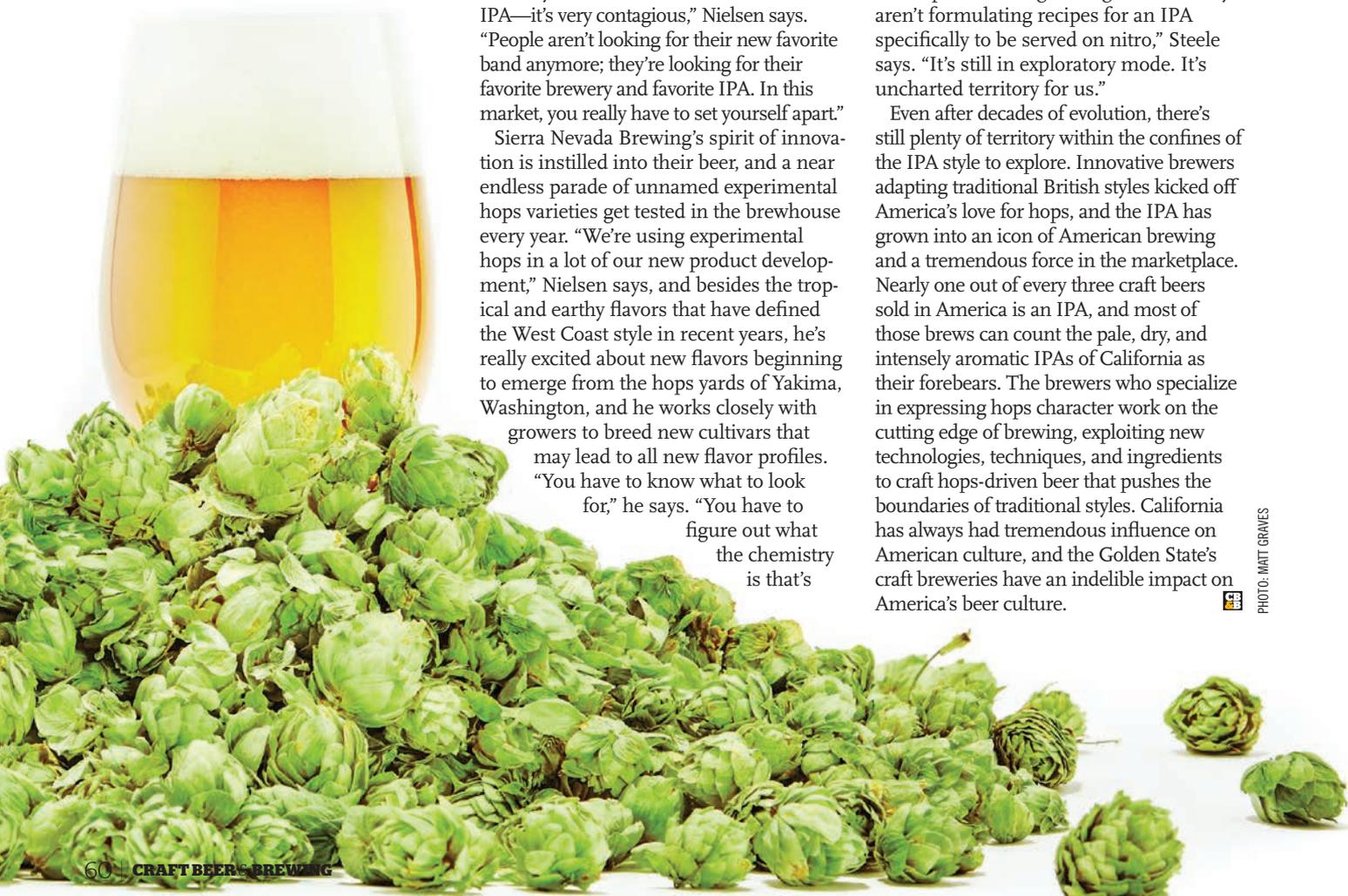
“Twenty years ago if you were brewing an IPA, you’d be using one of four ‘C hops’ varieties,” says Mitch Steele, “and now it’s all about new hops varieties. IPAs are going into new territory.”

Stone recently reformulated both their Pale Ale and the groundbreaking Ruination double IPA to feature more of these nouveau hops flavors. A trend of producing small digressions of tried and true IPA brands, such as the Grapefruit and Habanero variations of Ballast Point’s popular Sculpin IPA, is also becoming more common. “Beer drinkers crave variety,” Steele says, “and [variants] generate interest and curiosity.”

Offering IPAs for service on the nitrogen draft lines commonly reserved for stout styles is another way brewers have capitalized on customer curiosity, even though nitrogenation is counter to many of the qualities that define an IPA. A nitro IPA isn’t as aromatic as a standard carbonated IPA, and the perceived sweetness is greater. “Nitro has a cool factor right now, but I don’t think brewers fully understand the impact of nitrogenating an IPA. They aren’t formulating recipes for an IPA specifically to be served on nitro,” Steele says. “It’s still in exploratory mode. It’s uncharted territory for us.”

Even after decades of evolution, there’s still plenty of territory within the confines of the IPA style to explore. Innovative brewers adapting traditional British styles kicked off America’s love for hops, and the IPA has grown into an icon of American brewing and a tremendous force in the marketplace. Nearly one out of every three craft beers sold in America is an IPA, and most of those brews can count the pale, dry, and intensely aromatic IPAs of California as their forebears. The brewers who specialize in expressing hops character work on the cutting edge of brewing, exploiting new technologies, techniques, and ingredients to craft hops-driven beer that pushes the boundaries of traditional styles. California has always had tremendous influence on American culture, and the Golden State’s craft breweries have an indelible impact on America’s beer culture.

PHOTO: MATT GRAVES





THE IPAS OF THE PACIFIC NORTHWEST

We asked the brewers at Fremont Brewing, pFriem Family Brewers, The Commons Brewery, Boneyard Beer, and Block 15 whether they consider “Northwest-style” IPA its own subcategory of the IPA family. Here’s what they had to say... **By Emily Hutto**

I MISS MANY THINGS about living in the Pacific Northwest—among them, the region’s music scene and Portland’s equidistance from mountains and beach. Mostly though, I miss the IPAs. The India pale ale is celebrated, if not worshipped, in this lush region that produces some of the world’s most sought-after hops and some of the most sought-after IPAs. This beer style is omnipresent in Washington and Oregon, and—according to several of the region’s prominent brewers—it is evolving in aroma and flavor.

More Hops Forward

“The Northwest IPA of ten years ago is certainly different from what we might think of as a quintessential Northwest IPA today,” says James McDermet, the head brewer at Fremont Brewing in Seattle, Washington. “Classic Northwest IPA fits very well into the American-style IPA category and focuses on American hops characteristics like big juicy citrus in the aroma and flavor that is often balanced by some sweet, caramel malt character.”

The general trend in Northwest IPAs, according to McDermet, has been a move away from the caramel malty character and a focus on a drier, more hops-forward beer. “For our IPA, we try to maintain some malt sweetness to keep the beer from being too bracingly bitter and keep the beer more balanced while focusing

on Northwest hops aroma and flavor as much as we can,” says McDermet. “This is not too far away from the West Coast style—both focus on big hops aromas and flavors. The only real difference might be how dry the beer is and the perceived bitterness level. I think of West Coast IPAs as a bit more bracingly bitter, but it’s likely just due to the lack of malt character and low residual sweetness.”

Hazy and Aromatic

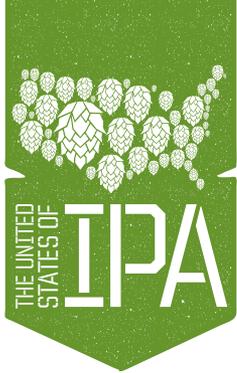
“Historically, I think a Northwest IPA [is] different from a West Coast IPA,” says Josh Pfriem who owns Hood River’s pFriem Family Brewers. Northwest IPAs have more of a sturdy malt bill, he explains. “They’re hazy and aromatic with an assertive bitterness while the West Coast IPA is lighter in body and brighter and [puts a] huge emphasis on aromatic hops.”

Pfriem’s 7 percent ABV, 65 IBU IPA is brewed with Gambrinus Canadian Pilsner, Simpsons Caramalt, Simpsons Crystal Light, and Simpsons Crystal Dark grains with Chinook, Mosaic, Citra, and Warrior hops before it ferments with American ale yeast. “I think most Northwest brewers are trying to achieve huge hops aromatics, light body with just enough malt to balance the hops, smooth finishes with just enough bitterness, and brightness,” he says about modern-day Northwest IPAs. “These beers are very fresh, hops-forward, and fruity... they have lots of citrus and drink easy.”

Late-Kettle and Dry-Hop Notes

Sean Burke of The Commons Brewery in Portland, Oregon, agrees that the Northwest IPA style is evolving. “Not that long ago Northwest-style IPAs tended to be a bit more malty and have a bit more residual sugar,” he says. “I think there is more of a push to pull back on the Munich and

“I think most Northwest brewers are trying to achieve huge hops aromatics, light body with just enough malt to balance the hops, smooth finishes with just enough bitterness, and brightness.”
—Josh Pfriem, pFriem Family Brewers



FIVE ON FIVE

The range and diversity of the IPA style has made it a favorite of craft-beer consumers and brewers alike. Here, we've asked five respected brewers what they reach for when they're in the mood for something hoppy.

Compiled by Emily Hutto

Josh Pfriem

Brewmaster and Cofounder at pFriem Family Brewers, Hood River, Oregon

Firestone Walker Union Jack (Paso Robles, California) has been an inspiring beer since its release. Most brewers consider it the standard for West Coast IPA. It is bright, hops-forward, fruity, clean, and fresh, with lots of citrus, just enough malt, and an incredible balance. It is an inspiring and delicious IPA!



Brant Dubovick

Head Brewer at DryHop Brewers & Corridor Brewery & Provisions, Chicago, Illinois

Fat Head's Head Hunter (Middleburg Heights, Ohio)—I love the aggressive and resinous hops profile in this classic West Coast IPA. Strong notes of pine, tropical fruit, and citrus are there aplenty. However, for such an aggressively hopped beer, the malt profile is present. The dry bitter finish leaves me wanting another sip every time without fail. It's the one beer in the country that I miss having easy access to. There's a reason that Matt Cole and his crew are consistent medal winners in the American IPA category. Now I want to drive to Cleveland. Anyone up for a road trip?



Gretchen Foster

Brewer at Great Storm Brewing, Colorado Springs, Colorado

Ska Brewing's Modus Hoperandi (Durango, Colorado) is probably my favorite right now. I love the balance of the citrus and piney hops and the fact that even though it is incredibly hoppy it finishes clean.



Sean Burke

Head Brewer at Commons Brewery, Portland, Oregon

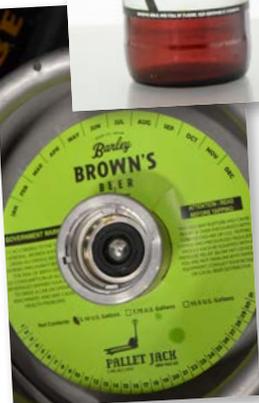
What I love about Breakside Brewery's IPA (Portland, Oregon), is that I have had the chance to see it develop. It's always been a good IPA, but I know those guys really dissected that beer a while ago, and the end result is everything I look for in a well-crafted IPA. It's not overly bitter; it explodes with hops flavor and aroma, and it has a nice dry finish that isn't cloyingly sweet. There is a reason it's a gold medal winner. Oh, and I can get it really fresh.



Jeremy Tofte

Founder at Melvin Brewing, Jackson, Wyoming

I find myself reaching for Barley Brown's Pallet Jack (Baker City, Oregon). I get to taste it only a few times a year, and every time I swear it's even better than the last time. It's got the tropical notes I like and it's pretty sessionable. To top it off, they have figured out the fifth ingredient: CO₂.



crystal/caramel malts to drive more of the late-kettle and dry-hops notes."

Burke also agrees with Pfriem that the Northwest IPA is somewhat different from the typical West Coast IPA. "West Coast style tends to be drier and a bit higher in alcohol. I think Northwest-style IPA would really be more of a subcategory of West Coast IPA."

Clean Finish

"I believe in aroma and hops flavor, not necessarily in bitterness," says Tony Lawrence, brewmaster and co-owner at Boneyard Beer Co. in Bend, Oregon. His deep copper-colored, citrus-forward RPM IPA is a testament to that statement. It's bold and refreshingly hoppy on the nose and to taste without the bitterness associated with dank Northwest-style IPAs. "Right now in the Northwest, IPAs have big aroma and big hoppy finishes; they're moving away from the dry and bitter IPA that we used to see more of back in the day," he says.

"My biggest influences for where I wanted my IPA to end up were Firestone Walker's Union Jack and Russian River's Pliny the Elder," Lawrence says. Boneyard's RPM is brewed with a blend of several Northwest hops—including Cascade, Centennial, and Citra—at more than 2.5 pounds per barrel.

"You need a bit of a backbone to support those hops," Lawrence explains. "You don't want the malt to steal the show, but [you want] a little bit of something for the hops to stand on. I put a little bit of sweetness in my IPA for the hops to dance with. I prefer dry beers, but I make this beer sweeter than I typically would like to [in order to] balance out the hopping profile."

A swig of RPM starts with big aroma that "sets everything into motion"; then comes bold malty sweetness, Lawrence says. "And then the hops flavor takes you on a journey. The whole thing finishes clean; it snaps off, and you're ready to repeat the process."

Unlike a lot of IPA brewers, Lawrence prefers IPA a few months after it has been brewed. "A little bit of age on the hops is good," he says. "I prefer pelletized hops after 3–6 months. If you let hops age out a little bit, some of their oils become less vegetative."

Unique Characteristics

"I'm unsure whether there is a single Northwest IPA style," says Nick Arzner who owns Block 15 Restaurant & Brewery in Corvallis, Oregon.

Block 15's Alpha IPA, Arzner explains, has evolved over the years to highlight hops on the "citrusy and piney side with background tropical fruit." Alpha is built on a blend of Crisp Best Pale and Rahr

BARLEY BROWN'S PALLET JACK PHOTO COURTESY OF BAKER COUNTY TOURISM; FAT HEADS HEAD HUNTER PHOTO COURTESY OF FAT HEADS; ALL OTHER PHOTOS: MATT GRAVES

“So many of the Northwest’s great IPAs express unique characteristics. Some are sweeter, some dry, some tropical or citrus or dank herb leaning, some favor malt character. If anything, ‘Northwest-style IPAs’ tend to have a great aroma and drinkable balance.”

—Nick Arzner, Block 15 Restaurant & Brewery



2-row malts with kettle-hopping of CTZ, Cascade, Centennial, and Chinook “and a hearty dry-hop addition of Centennial, Citra, and Simcoe,” he says. Most of the hops that Block 5 uses come from Oregon and Washington but are supplemented by Australian, European, and New Zealand hops. “For hops-forward beers, I favor a blend of the newer hops varieties—such as Citra and Mosaic—with varieties that have been around for a bit—such as Columbus, Chinook, and Centennial.”

Block 15 also makes an 8.1 percent ABV, 110 IBU double IPA called Sticky Hands. It was born out of The Hop Experience Project—Block 15’s rotating recipe that combines alternating base beers with different hops varieties. “Through brewing variations, we discover ingredients and techniques that we then apply to our base version,” Arzner says. “We began brewing

Sticky Hands in 2012. During that time, we worked with six different base malts, numerous specialty malts, four yeast strains, and myriad hops combinations and products. Currently, we can 16-ounce (473 ml) cans of Sticky Hands every other week to keep it fresh and lively.”

“So many of the Northwest’s great IPAs express unique characteristics. Some are sweeter, some dry, some tropical or citrus or dank herb leaning, some favor malt character. If anything, ‘Northwest-style IPAs’ tend to have a great aroma and drinkable balance,” says Arzner.

It seems that Northwest-style IPA, if there is such a (sub)category, is an ever-evolving beer style. “Five years ago the general concept for designing an IPA was a little old-school,” says Lawrence. “Northwest brewers are pioneers, but there was a mentality that there’s no reason to fix it if it’s not broken. But then some new brewers came out swinging with a different template.”

That template, agree all of these brewers, is one that’s bright and hops-forward but not aggressively bitter. It’s more experimental in the hops and methods used; and it’s still just as bold and complex as those old-school pioneer IPAs. 



MAKE IT Alpha IPA

This is Block 15 Brewing’s house IPA. It’s packed with notes of citrus, dank pine, and papaya with just enough malt character to prop them up and bitterness to balance.

ALL GRAIN

Batch size: 5 gallons (19 liters)

Brewhouse efficiency: 72%

OG: 1.061

FG: 1.009

IBUs: 110 calculated, but feels like 70

ABV: 6.8%

MALT/GRAIN BILL

4 lb 13 oz (2.2 kg) Rahr 2-Row

5 lb 13 oz (2.63 kg) Crisp Best Ale

8 oz (227 g) Simpson Caramalt

6 oz (170 g) Patagonia Caramel 35L

10 oz (283 g) Carafoam

HOPS AND ADDITIONS SCHEDULE

0.25 oz (7 g) CTZ at FWH

1 oz (28 g) Cascade at 20 minutes

0.75 oz (21 g) Chinook at 20 minutes

1 oz (28 g) Centennial at 10 minutes

0.75 oz (21 g) Chinook at 10 minutes

0.75 oz (21 g) CTZ at 10 minutes

Whirlfloc at 10 minutes

1.5 oz (42 g) Centennial at dry hop

1 oz (28 g) Citra at dry hop

1 oz (28 g) Simcoe at dry hop

(The hops are all pellet hops)

YEAST

American Ale yeast or, if you want a fuller body, English Ale yeast, such as Wyeast 1098.

DIRECTIONS

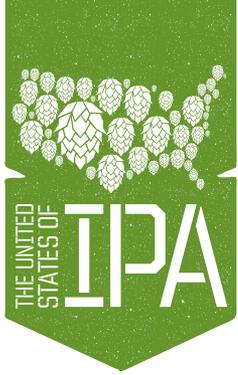
Single infusion mash at 153°F (67°C) for 45 minutes. Vorlauf for 15 minutes. Collect 5.5 gallons (20.8 liters). Boil for 100 minutes following the hops schedule. Cool to 66°F (19°C) and oxygenate. Pitch 1.2*10⁶ cells/ml of American Ale and let ferment for 5–6 days, raising the temperature to 72°F (24°C) by the fifth day. Rest one day.

Transfer to secondary onto the dry hops. At 24 and 48 hours, gently swirl the carboy to rouse the hops, crash at 72 hours and remove hops or rack the beer to another vessel. Cold condition at least 10 days, but no more than 3 weeks.

BREWER’S NOTE

The water in Corvallis, Oregon, is soft. We add calcium chloride and calcium sulfate to the mash to achieve 125ppm of calcium, 180ppm of sulfate, and 85ppm of chloride. Adjust your water accordingly.





THE MIDDLE WAY: MIDWEST IPAS

When it comes to making IPAs in the Midwest, today's brewers are marrying Old-World tradition with New-World ingredients for a richer, fuller flavor. **By Tom Wilmes**

THE AMERICAN MIDWEST IS where innovation meets tradition in the most unassuming and satisfying ways. You can taste it in the food, you can see it in the architecture, and it's definitely a distinguishing characteristic of the beer.

"We're in a part of the country that's somewhat removed from a lot of the spiky trends, which is nice," says Todd Haug, director of brewing operations at Minnesota-based Surly Brewing Co. "What we see here tends to fall along a more narrow bandwidth, but it's way more solid. We may be a few years behind on some of the food and beverage trends as a result, but we have a better foundation for what good food and beer means and for the right reasons, not just because they're popular or what you're supposed to be doing."

America's obsession with IPAs is a perfect example in microcosm. There's seemingly infinite room for variance and experimentation within the style, and brewers continue to push hard on either end—from super dense and malty grain bills in the English tradition on one side to very lightly malted with extreme hops additions on the other. Not surprisingly, Midwestern brewers tend to fall, well, somewhere in the middle.

"The Midwest is a hot-bed for blending together Old-World brewing tradition with new American stuff," says Haug. "I think it's organically come out of the breweries

and brewing culture that was established here very early on coupled with a new wave of American ingredients—even fifteen years ago hops varieties weren't what they are now—and that's what's manifested itself into what people are calling a Midwestern IPA."

While it's tough to define a Midwestern-style IPA as being just one thing, most examples falling along that range exhibit a balanced malt character with some depth and complexity and are hopped at similar rates as West Coast IPAs using primarily American hops for flavor and aroma.

Full-Bodied Backbone

"It's not even always crystal malt," Haug says of the grain bill. "It could be in the mashing regimen and leaving a little more residual sugars to give it balance."

While three highly decorated mainstays tend to represent the Midwestern style—Bell's Two-Hearted Ale, Goose Island's Goose IPA, and Founders Centennial IPA—smaller brewers are further exploring this sweet spot with a wide variety of raw ingredients and techniques. Somewhat counter-intuitively, it's not always as much about amping up the hops as it is about adjusting the grain bill to best showcase the beer's hops character.

Haug points to Surly's flagship beer, Furious, as an example of what's happening on the fringes of the middle. "The gravity



is a lot higher because it's a 7 percent beer and uses a lot of malts that are not even English varieties but make really good English-style ESBs," he says. "It's that richness and that full-bodied backbone that allow us to pile on all these hops and have this really interesting synergy of sweetness and bitterness that interplays really well, instead of just all bitterness."

What's also nice about some of our IPAs is that they change as they warm up in the glass, and even with age," he says.

The Right Balance

Matt Gallagher, brewmaster at Half Acre Beer Co. in Chicago, agrees on the primary importance of the grist bill in brewing a well-balanced IPA. "From my standpoint, the most challenging part of brewing a hoppy beer is the malt bill and less the hops bill," he says. "You can keep throwing hops at it, but if the malts aren't right, those hops aren't going to come through correctly."

Gallagher says striking that right balance was the toughest part about developing the recipe for Gone Away (formerly known as Heyoka), the brewery's winter seasonal IPA and a silver-medal winner at the 2014 Great American Beer Festival.

Gallagher calls the beer a "classic IPA amped up a couple of notches in intensity" with piney, floral, and spicy flavors from lots of Chinook, Centennial, and Columbus hops. He was originally aiming for an IPA more in keeping with the West Coast style and devised a recipe with lots of pale malt in place of the 2-row that the brewery usually uses to increase the hops amplitude, but when he tasted the results, he didn't find the clean hops expression he was looking for.

He brewed several subsequent batches and "found that if we kept the hops the same, but lowered the percentage of pale malt and increased the percentage of 2-row, all the sudden the hops really jumped out and were shining through."



MAKE IT

Dead President Double IPA

This recipe from Eric Bean, owner and brewmaster at Ohio's Columbus Brewing Company, is not one that they brew, but it is inspired by many of the beers that they brew throughout the year. The simple malt bill is designed to allow the hops to shine.

ALL-GRAIN

OG: 1.077

FG: 1.010

IBUs: 85

ABV: 8.5%

MALT/GRAIN BILL

12 lb (5.4 kg) base malt
1 lb 13 oz (467 g) Vienna malt
12 oz (340 g) Dextrin malt
8 oz (227 g) Dextrose (corn sugar)

HOPS SCHEDULE

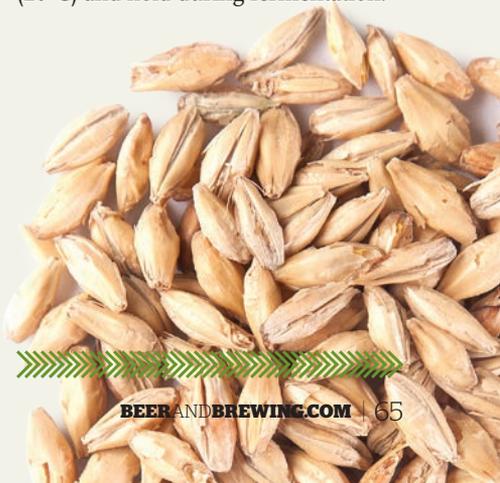
1 oz (28 g) CTZ [15.5% AA] at 90 minutes
1 oz (28 g) Chinook [12.7% AA] at 30 minutes
1 oz (28 g) Centennial [9% AA] at 15 minutes
1 oz (28 g) Simcoe [11.2% AA] at 15 minutes
1 oz (28 g) Citra [12.8% AA] at 0 minutes
1 oz (28 g) Centennial [9% AA] at 0 minutes
3 oz (85 g) Citra at dry hop
3 oz (85 g) Centennial at dry hop

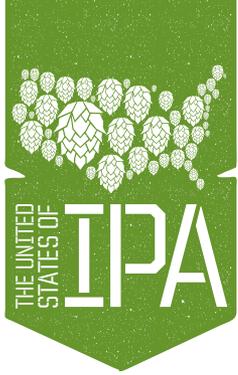
YEAST

White Labs WLP001 (California Ale) or Wyeast 1056 (American Ale)

DIRECTIONS

Mash at 150°F (66°C) for 60 minutes. Boil for 90 minutes, following the hops schedule. Pitch the yeast at 64°F (18°C). Let the temperature rise to 68°F (20°C) and hold during fermentation.





We finally reached a tipping point where there's enough maltiness that it's balanced from a drinkability standpoint, but not so much that it covers up the hops flavors."

Gallagher uses a liquor-to-grist ratio of about 2.75 to one, he says, with a 90-minute boil and a bittering addition at 60 minutes, as well as hops additions at 30, 15, and 5 minutes and "a big whirlpool addition" before the beer is dry hopped. The beer is fermented with the same ale yeast and at the same temperature that Half Acre uses for most all of its beers.

Customer Base

Eric Bean, owner and brewmaster at Ohio's Columbus Brewing Company, also appreciates a similar balance of underlying malt flavor to accentuate the hops character in an IPA.

While the brewery's double IPA, Bodhi, won a bronze medal in the American-style IPA category at the 2014 Great American Beer Festival, Bean considers its flagship IPA to be more representative of the brewery's Midwestern roots.

Where Bodhi "is all pale malt, a little crystal, and as many hops as we can stuff in there," Bean says, Columbus Brewing's standard IPA "is very balanced in the sense that it has a fine tropical fruit characteristic but also some underlying malt tones that I think really bring out those hops flavors and keep it very drinkable."

He's also conscious of his local customer base, which, in keeping with Midwestern tastes, tends to prefer beers that are more straight-down-the-middle and reliably drinkable.

"To be honest, our IPA is never going to win GABF Gold in the IPA category," he says. "We know what's going on on a national level, and we're not so concerned with that. Our IPA is more consumer driven, what we think our consumers want and what we want to be able to have in an everyday drinking beer."

In addition to the grain bill, Bean also continues to tweak his liquor-to-grist ratio in search of perfect attenuation. "We're looking for that right amount of residual sweetness to bring out the flavors in the beer and keep it refreshing, too," he says. "You don't want something cloying [because] it muddles the experience and totally ruins the hops flavor."

Many Grains

Gerrit Lewis, cofounder of Chicago-based Pipeworks Brewing Co., hesitates to allow that there even is "a definitive Midwestern IPA character"; however, he has found that a substantial malt backbone is a great way to showcase and fully express the character in different hops varieties.

Pipeworks makes a huge variety of specialty and one-off beers in its quest to explore flavors and produce "a beer for every occasion," but, especially with the brewery's series of single-hops Imperial IPAs, Lewis prefers a grain bill that employs four or five different grains rather than just one or two.

"It's darker in color and a little stickier with more character malt," he says. "The flavor is a little rounder; more full and robust overall."

And, in the Midwestern tradition, it provides a solid base on which to experiment with a variety of bold new flavors. 

"We found that if we kept the hops the same, but lowered the percentage of pale malt and increased the percentage of 2-row, all of a sudden the hops really jumped out and were shining through. We finally reached a tipping point where there's enough maltiness that it's balanced from a drinkability standpoint, but not so much that it covers up the hops flavors."
—Matt Gallagher, Half Acre Beer Co.

MAKE IT Less Thinking

This recipe from Matt Gallagher, brewmaster at Half Acre Beer Co. in Chicago, is a nice Amarillo-focused American strong pale ale (but you could also call it an IPA). It's great for highlighting two different hops, but it could easily be used to evaluate a single varietal as well. It is best consumed during the summer months surrounded by nature.

ALL GRAIN

Batch size: 5 gallons (19 liters)

Brewhouse efficiency: 72%

OG: 1.051

FG: 1.007

IBUs: 50

ABV: 6%

MALT/GRAIN BILL

8 lb (3.6 kg) 2-row malt

1.5 lb (680 g) Vienna

10 oz (283 g) flaked oats

HOPS SCHEDULE

0.25 oz (7 g) Warrior at 60 minutes

0.5 oz (14 g) Amarillo at 30 minutes

0.75 oz (21 g) Amarillo at 15 minutes

1.5 oz (43 g) Amarillo at whirlpool

0.5 oz (14 g) Centennial at whirlpool

3.5 oz (99 g) Amarillo at dry hop (day 6 of fermentation)

1 oz (28 g) Centennial at dry hop (day 6 of fermentation)

YEAST

White Labs WLP051 California Ale V

DIRECTIONS

Mash at 145°F (63°C) for 60 minutes, then rest until conversion is complete. Boil for 90 minutes. Pitch the yeast and ferment at 65°F (18°C). Dry hop on day 6 of fermentation (when fermentation is slowing down), crash the beer on day 10 to 31°F (0°C). Wait a week or two before packaging.



THE IPAS OF NEW ENGLAND

New England IPAs are big beers, there is a definitive haze to the beer, and brewers embrace the big, bold hops flavors rather than the bitterness of the India pale ales of the past. **By Norman Miller**

TOD MOTT BREWED THE first IPA in New England in 1993 for the Harpoon Brewery (Boston, Massachusetts, and Windsor, Vermont). It was clear and balanced, and—for its time—it was an aggressively hopped beer.

Harpoon IPA is still a popular beer, but IPAs in New England have changed significantly in the twenty-plus years since Mott first poured the hops into the boil. “I think people’s palates have changed,” says Mott, the veteran brewer who now owns and operates Tributary Brewing Company in Kittery, Maine. “Nowadays, people expect it to be hops-forward and not too bitter. Compared to today, the Harpoon IPA is like a pale ale.”

India pale ales and their bigger brothers rule supreme in world of New England breweries, with breweries such as The Alchemist, Hill Farmstead, and Lawson’s Finest Liquids in Vermont; Trillium Brewing Company and Tree House Brewing Company in Massachusetts; and Bissell Brothers in Maine being responsible for some of the most sought-after beers in the country.

“Back in the 1990s, Harpoon IPA was the standard beer, and there were beers like Wachusett purple [the IPA has a purple label] and Redhook’s Ballard’s Bitter, but there weren’t many IPAs that were flagships or year rounds,” said Ben Roesch, brewmaster at Worcester, Massachusetts’s Wormtown Brewery, known for IPAs such as Be Hoppy and Hopulence. “You could kind of see the snowball rolling down the hill and becoming more prominent. They just popped.”

John Kimmich, owner/brewer of The Alchemist in Waterbury, Vermont, says



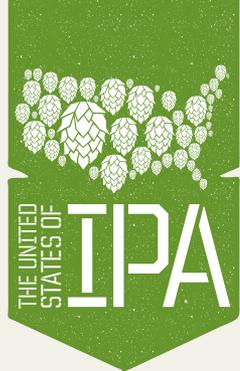
it was those early beers and his early brewing experience at the landmark Vermont Pub & Brewery in Burlington that helped guide him to his beers today (and provided his yeast, Conan—see “Gather No Moss,” *Craft Beer & Brewing Magazine*®, Issue 1/Spring 2014).

Kimmich began brewing Heady Topper in 2004 at the former Alchemist brewpub. He opened his canning brewery in 2011 and now brews 180 barrels of Heady

Topper a week. The beer is so popular that he had to close the brewery’s retail shop because so many people were coming to buy the beer that neighbors complained.

More Flavor, Less Bitterness

“The reason Heady Topper is so popular and continues to be popular is it lives up to expectations,” says Kimmich. “If you have had it and you come back to it, it’s just as good as it was. That’s a testament to the



MAKE IT

Lawson's Double Sunshine IPA

Sean Lawson, owner of Lawson's Finest Liquids, a small-batch brewery based in Warren, Vermont, shared this recipe for their Double Sunshine IPA, which is packed with juicy tropical fruit flavors and bright herbal aromas thanks to the abundance of U.S. grown hops.

ALL-GRAIN

Batch size: 5 gallons (19 liters)

OG: 1.074

FG: 1.013

IBU: 100+

SRM: 6

ABV: 8%

MALT/GRAIN BILL

8.5 lb (3.85 kg) 2-row pale ale malt

12 oz (340 g) Carapilsen malt

2.5 lb (1.1 kg) Vienna-style malt

1 lb (454 g) flaked oats

6 oz (170 g) Caramunich-type malt

HOPS & ADDITIONS SCHEDULE

0.75 oz (21 g) Columbus [14% AAU] at 60 minutes

1 oz (28 g) Citra [12.5% AAU] at 20 minutes

1 lb (454 g) corn sugar at 10 minutes

3 oz (85 g) Citra [12.5% AAU] at 5 minutes

3 oz (85 g) Citra [12.5% AAU] at knockout

3 oz (85 g) Citra [12.5% AAU] at dry hop

YEAST

Fermentis Safale US-05, Lallemand BRY-097, Wyeast 1056 (American Ale), or White Labs WLP001 (California Ale).

DIRECTIONS

Single infusion mash: Achieve a target mash of 152°F (67°C). Hold for 45 minutes, then raise to mash-out temperature and begin lauter phase.

Collect enough wort to boil 6.5 gallons (24.6 liters) and boil for 60 minutes, following the hops and additions schedule. After the boil is complete, begin a whirlpool in the kettle and let the knockout hops rest in the hot wort for at least 30 minutes before chilling.

Chill the wort rapidly to 68°F (20°C). Ferment at 68°F (20°C) for one week. Cool to 55°F (13°C) to settle the yeast. Dump the yeast from the bottom of the fermentor or rack to a clean, sanitized vessel. Add the dry hops and let the beer sit for an additional four to seven days at 55–57°F (13°C).

EXTRACT

Replace the 2-row and Carapilsen malts with 6 pounds (2.7 kg) of light liquid malt extract. Mix the crushed Vienna-style malt, flaked oats, and Caramunich-type malt into 2 gallons (7.6 liters) of water to achieve a temperature of 152°F (67°C). Hold at this temperature for 45 minutes.

Rinse the grains with 2.5 quarts (2.6 liters) of hot water, add the liquid extract, and bring to boil. Top off the kettle to 6.5 gallons (24.6 liters). Boil for 60 minutes, following the hops schedule and adding 1.5 lb (680 g) of corn sugar with 10 minutes left in the boil. Continue as directed above.

incredible amount of detail on my part and my team's part. That is something that is underestimated today. I taste many beers that were at one time great and now are not."

Although Kimmich won't go into details about his brewing process, he says he doesn't think he's "doing anything wildly different from other breweries. My palate has always steered me to the cleaner, brighter, later fresh hops character, as opposed to long hops additions throughout the boil," he says.

Noah Bissell, co-owner and brewmaster at Bissell Brothers in Portland, Maine, says the old school of brewing IPAs was to add hops at different points during the boil. Now, when he brews his beers, such as the popular Substance, he adds the hops late in the brewing process, and there is additional dry hopping. That method, Bissell says, significantly cuts down on bitterness while bringing out the natural flavor of the hops.

"Five or six years ago, it was all about the bitterness: 'How tough are you? Can you handle this?'" says Bissell. "Now, it's more about the myriad of flavors. I think a lot of brewers are making beers that are similar and have lots and lots of late hops and lots of dry hopping. In Substance, the first bittering addition is 1/30th the size of the hops addition after we turn off the heat on the kettle. Years ago, the bittering additions were what it was all about—they were getting 100 IBUs from the first addition. Now, we don't even care about IBUs."

Another difference is the number of hops available, says Sean Lawson, owner of Lawson's Finest Liquids, a small-batch brewery based in Warren, Vermont. "It used to be all the classic 'C' hops, such as Cascade, Centennial, and Columbus," says Lawson, brewer of the popular IPA, Sip of Sunshine, and the double IPA, Double Sunshine. "Now you have all these New Zealand hops and hops such as Mosaic and Equinox. It gives me a lot of flexibility."

"I try to let the hops shine through," continues Lawson. "The hops are the predominant flavor, and the malt really plays a supporting role. Brewers today use techniques, including hop bursting, where you add hops late in the boil and even in the whirlpool. This brings out tons of flavor and allows you to really show the hops flavor in the finished product."

At Trillium Brewing Company, Jean-Claude Tetreault (brewmaster and owner) draws inspiration from such breweries as Jolly Pumpkin in Michigan, Allagash Brewing Company in Maine, and Cantillon in Belgium. But his IPAs and double IPAs, such as Congress Street IPA, Mettle, and Artaic (a double IPA brewed with 100 percent Mosaic hops and wildflower honey), bring



“Five or six years ago, it was all about the bitterness: ‘How tough are you? Can you handle this?’ The bittering additions were what it was all about—they were getting 100 IBUs from the first addition. Now, it’s more about the myriad of flavors. Now, we don’t even care about IBUs.”

—Noah Bissell, Bissell Brothers

the crowds to his small Boston brewery. “New England brewers have figured out a way to put their own stamp on it and to create their own version of the IPA,” said Tetreault. “There’s now a New England IPA moniker, which was something created by the beer fan.”

Roll Out Those Hazy, Crazy IPAs

One of the characteristics of the so-called New England IPA is the haziness of the beers. Traditionally, IPAs are clear beers, but many of the more popular IPAs in New England are hazy—or “turbid” if you talk to the founder of a popular chain of beer stores in New England.

“It’s a pretty controversial topic,” says Tetreault. “We’re primarily holding aroma and flavor in the highest regard. Everything else falls secondary to that. It was pretty jarring when we brewed our first batch and we looked at it in a glass and asked, ‘What are we going to do?’ Then

we tasted it and said, ‘This is right.’ Now, when we have a beer that isn’t hazy, people ask whether something went wrong.”

Bissell agrees. “Our beers are pretty hazy. Beers don’t have to be clear if you’re making hoppy beers.”

With all of the various IPAs available today, how much more can IPAs evolve? Shaun Hill of Hill Farmstead (Greensboro Bend, Vermont), for one, doesn’t know. “Nearly every yeast, every barrel, every hops, and every citrus fruit has been used in combination with the three magic letters,” says Hill. “Surely, something new will transpire, but I do not see a revolution.”

(Full disclosure: The Wormtown Brewery brews a Chocolate Coconut Stout named Norm for the author of this article. The author did not participate in the brewing of the beer and does not receive any compensation for the beer.)



MAKE IT Ben's Double IPA

Wormtown Brewery (Worcester, Massachusetts) Brewmaster Ben Roesch shared this extract recipe for his double IPA.

EXTRACT

Batch size: 5 gallons (19 liters)

OG: 1.080

FG: 1.014

IBUs: 100+

ABV: 8.6–8.7%

MALT/GRAIN BILL

4 oz (113 g) Carapils

1 lb (454 g) Maris Otter

8.5 lb (3.85 kg) extra light malt extract (or sufficient to hit the original gravity)

HOPS SCHEDULE

2 oz (57 g) Equinox at FWH

2 oz (57 g) Columbus at 60 minutes

2 oz (57 g) Amarillo at 45 minutes

2 oz (57 g) Mosaic at 30 minutes

1 oz (28 g) Simcoe at 10 minutes

1 oz (28 g) Amarillo at 0 minutes

3 oz (85 g) Equinox dry hop in the fermentor

3 oz (85 g) Equinox dry hop in secondary

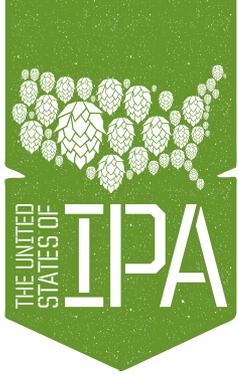
YEAST

American Ale

DIRECTIONS

Steep the grains at 155°F (68°C) in 1 gallon (3.8 liters) of water for 30 minutes. Remove the grains, top up with the extract and hot water to hit your desired boil volume, and boil for 60 minutes. Ferment at 68°F (20°C).





HOPS AROMA: UNCHARTED WATERS

Researchers recently have begun to unravel the mystery of hops aroma, but many unknowns remain.

By Stan Hieronymus

FIRST, THE BAD NEWS. Although both Citra hops and coriander contain significant amounts of the essential oils geraniol and linalool, substituting coriander for Citra hops in an India pale ale recipe will not produce an award-winning IPA. There's good news to come, but first, let's dig into a few basics.

Hops Oils 101

A hops cone contains 40 to 50 percent cellulose, 15 percent protein, and 10 percent water, but it is the alpha acids (from 2 percent to occasionally 20-plus percent) and essential oils (as little as a half a percent) that interest brewers. Isomerized, alpha acids provide bitterness; volatilized, the compounds in essential oils contribute to—and sometimes dominate—aroma and flavor.

The composition of oils varies based first on the hops variety, then on multiple other factors, but most of the compounds (50 to 80 percent) will be hydrocarbons (from 20 to 50 percent oxygenated hydrocarbons) and less than 1 percent sulfur compounds.

Those compounds classified as hydrocarbons are highly volatile, not very soluble, and are perceptible in finished beer only when added very late in the boil or post-fermentation. Myrcene is almost always the most prominent, constituting 50 percent or more of the oils in hops

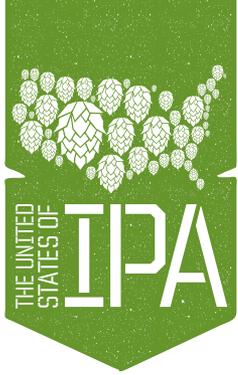
varieties such as Cascade and Simcoe. It has a green, herbaceous, and resinous aroma associated with fresh hops that will be scrubbed away during boiling and fermentation but that will provide distinctive piney character to a dry-hopped beer.

The oxygenated hydrocarbon compounds are more soluble and aromatic. Their aromas, or new ones resulting from the fermentation process, are more likely to show up in finished beer. They include linalool, geraniol, citronellol, and hundreds of other compounds. The most prominent of them will constitute less than 1 percent of the hops oils. Scientists first isolated some of these compounds almost 200 years ago, and Alfred Chapman put names to some of them near the end of the nineteenth century. But it was the introduction of gas chromatography in the 1950s that allowed researchers to identify almost 1,000 compounds.

Although sulfur compounds (thiols) are a small portion of the oils, they have very low perception threshold levels (meaning that it takes very small amounts to impact sensory perception) and can significantly influence aroma, either positively or negatively. Measuring thiols is more difficult than measuring hydrocarbons because thiols are present in such small amounts and very expensive and sophisticated analytical instrumentation is needed. Only recently have scientists linked individual thiols with passion fruit, tropical fruit, sauvignon blanc grapes, and other exotic aromas that characterize hops such as Citra and Mosaic. Thiols tend to be divisive

PHOTO: MATT GRAVES





Hops Compounds: Key Takeaways

No single compound is responsible for a specific “hoppy” aroma.

You cannot simply add X hops for floral notes and Y hops for fruity notes based on the amount of certain oils in each, no matter what the Type/Code Hops Chart poster might lead you to believe.

The concentration or amount of a given compound alone is not an indicator of its contribution to aroma.

But it is relevant whether it occurs above or below its threshold of detection. Sensory perception of a compound does not track in a linear way with the amount of that compound.

Depending on a compound’s concentration, the sensory perception of that compound can change.

Less can be more, which is why thiols at low levels result in pleasant fruity aromas, but at higher levels are perceived as catty.

Synergy and masking play a major role in perception.

Synergy occurs when two or more compounds interact to create something different. Masking occurs when one compound suppresses the perception of another.

Most research focuses on the analysis of individual components.

Hops science is still focused on understanding the individual compounds and has yet to dig deeper into exploring the interactive sensory effects of different combinations of those compounds. You have to learn to walk before you can run.

The interactions are the keys to unlocking the secrets of aroma.

Compounds within hops change constantly, beginning even before cones are picked and continuing post-fermentation. Much recent research has focused on biotransformations (the biochemical changes that occur in the presence of yeast). The matrix that includes different hops varieties and different yeast strains in different wort environments is confoundingly complex.

because some drinkers are more likely to perceive ribes (currant, gooseberry) while others perceive tom-cat urine.

The Knowns and the Unknowns

Individual compounds may be associated with specific aromas. For instance, citronellol is green, floral, and citrusy; geraniol is floral, often reminding one of roses or geraniums; linalool is floral and orange (see “13 Hops-Odor Compounds to Know,” page 73, for other hops-odor compounds it is useful to know). However, when the compounds interact with the hundreds of other compounds in hops, still more odor compounds result.

“Our ultimate goal is to determine what it is in hops oil that drives flavor,” says Thomas Shellhammer, who is in charge of the brewing science education and research programs at Oregon State University. He and OSU PhD candidates Daniel Sharp and Daniel Vollmer made it clear at the 2015 Craft Brewers Conference how challenging that is.

Now, the Good News

A Japanese team brewed separate beers, one using coriander seeds and the other with Citra, to compare what happens to the essential oil geraniol in the presence of an excess of linalool during fermentation. In both beers, the geraniol was transformed into the compound beta-citronellol, which contributes to citrus and fruity flavor. Although the beer brewed with coriander had those fruity flavors, it did not have the same tropical character as the one made with Citra.

The researchers at Sapporo Breweries followed that experiment with one that examined the behavior of beta-citronellol and geraniol—again in the presence of linalool—when various different varieties were blended. They discovered, for instance, that when geraniol-rich Bravo hops are added along with Simcoe (rich in 4-mercapto-4-methyl-pentan-2-one), the beer is perceived as more flowery, citrus, and fruity.

That’s useful information, but unfortunately it does not assure that blending Chinook, or some other variety high in geraniol, with Nugget, which has more linalool than most other hops, will do the same. Our knowledge of how these low-level chemical interactions create compounds that then translate into sensory perceptions is still at a very formative stage.

Although researchers recently have begun to unravel the mystery of hops aroma, many unknowns remain. Panelists from OSU made that clear during the seminar “Understanding How to Control Flavor and Aroma Consistency in Dry Hopped Beer” at the 2015 CBC. “I imagine you guys probably have more questions about this than when I started. I do, too. That’s kind of the way science goes,” Daniel Sharp admitted candidly. “It’s job security on our part.”

The Takeaways

“[Brewers] want a checklist that matches oils and flavors,” says Peter Darby of Wye Hops in England. “It’s not that simple.” For example, brewers have asked hops breeders for new hops varieties with high oil levels. But in a first round of research focused on Cascade, Vollmer found that the quality of the oil—as determined both by sensory panels and by examining the levels of specific compounds—influences perception more than quantity.

No single compound is responsible for a specific “hoppy” aroma. “You can’t say, ‘We’ll add a little bit of this, a little bit of that,’” says ex-Miller Brewing hops chemist Pat Ting, explaining that brewers make a mistake when they try to equate specific oils with specific odor compounds.

The concentration or amount of a given compound alone is not an indicator of its contribution to aroma, but it is relevant whether it occurs above or below its threshold of detection.

Researchers at Sapporo Breweries discovered that when geraniol-rich Bravo hops are added along with Simcoe (rich in 4MMP), the beer is perceived as more flowery, citrusy, and fruity. But unfortunately that does not assure that blending Chinook, or some other variety high in geraniol, with Nugget, which has more linalool than most other hops, will do the same.

Depending on a compound's concentration, the sensory perception of that compound can change. Less can be more, which is why thiols at low levels result in pleasant fruity aromas, but at higher levels are perceived as catty.

Synergy and masking play a major role in perception. Synergy occurs when two or more compounds interact to create something different. Masking occurs when one compound suppresses the perception of another.

Most research focuses on the analysis of individual components—because those still aren't understood—rather than the interactive sensory effects. The interactions are the keys to unlocking the secrets of aroma.

Hops-derived compounds change constantly, beginning even before cones are picked and continuing post-fermentation. Much recent research has focused on biotransformations (the biochemical changes that occur in the presence of yeast). The matrix that includes different hops varieties and different yeast strains in different wort environments is confoundingly complex.

One from Column A

Studies at OSU and elsewhere ultimately will help commercial breweries make beers with more consistent hops flavor and aroma profiles. Vollmer's ongoing research determined that several lots of Cascade grown on different farms in the Pacific Northwest might have the exact same overall level of hops oils but the composition of those oils is very different, and not surprisingly a sensory panel can confirm the difference. "[Brewers] need to be aware that this phenomenon can happen," he says.

When Sharp began working on his masters degree in 2010, brewers often couldn't even get information about the percentage of essential oils in the hops they bought. "Now you are starting to see linalool and geraniol [content] listed more often. It's getting there," he says. Perhaps information about the amounts of those compounds and still others will be available to even the smallest brewers, and of course homebrewers, by the time scientists determine which compounds are meaningful.

The research at Sapporo suggests how broad the possibilities are, although it doesn't guarantee what might result from blending any particular geraniol-rich hops, or even two of them, with one containing an abundance of linalool. For one thing, the sulfur compound 4-mercapto-4-methylpentan-2-one (4MMP) also occurs in many of the same varieties, and it influences the creation of fruity-odor compounds.

But coriander contains no 4MMP, which is one more reason to stick to hops when brewing an IPA.

13 Hops-Odor Compounds to Know

- caryophyllene** » woody
- citronellol** » citrusy, fruity
- farnesene** » floral
- geraniol** » floral, rose, geranium
- humulene** » woody, piney
- limonene** » citrusy, orange
- linalool** » floral, orange
- myrcene** » green, resinous, piney
- nerol** » rose, citrusy
- pinene** » spicy, piney
- 3-mercaptohexanol** » guava, tropical
- 3-mercaptoheyl acetate** » muscat, passion fruit
- 4-mercapto-4-methyl-pentan-2-one** » black currant, tropical

Hops by Compound

Geraniol-rich Hops

Aurora, Bravo, Cascade, Centennial, Chinook, Citra, Mosaic, Motueka, Styrian Golding

Linalool-rich Hops

Amarillo, Cascade, Centennial, Citra, Glacier, Millennium, Mount Hood, Nugget, Pacifica, Willamette

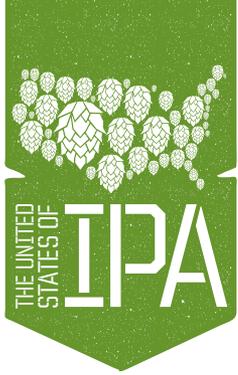
Hops that Contain 4-mercapto-4-methylpentan-2-one (4MMP)

Apollo, Cascade, Centennial, Citra, Chinook, Cluster, Equinox, Mosaic, Simcoe, Summit



PHOTO: MATT GRAVES





HOW TO BREW YOUR BEST IPA EVER

If you're ready to take your IPA to the next level, and maybe even win an award along the way, use these tips to improve your odds of making the final round. **By Dave Carpenter**

INDIA PALE ALE REMAINS the most popular craft-beer style in the United States. With unprecedented access to a diverse range of hops and plenty of inspiration in the form of innovative breweries across the country, it's no wonder that homebrewers continue to flock to American IPA.

IPA's popularity, however, means that those who enter competitions in the India Pale Ale category may need to do a bit more to set their examples apart. If you're ready to take your IPA to the next level, and maybe even win an award along the way, use these tips to improve your odds of making the final round.

Understand the Style Guide

Making a great beer is as simple as brewing something that you enjoy drinking. But making an award-winning beer means brewing something that a beer judge enjoys drinking *and* feels meets the style parameters. Tasting is, of course, inherently subjective, but trained beer judges work hard to make the process as repeatable and objective as possible.

Most homebrew competitions adhere to the beer style guide published by the Beer Judge Certification Program (BJCP). Although the 2015 guide has been available for some time, competitions are still in the process of moving from the 2008 edition to the new standard. So be sure to

double check the competition guidelines before you enter to make sure you choose the right style category for your entry. See "BJCP IPA Categories" (page 76) for the 2008 and 2015 categories.

Choose Ingredients with Care

IPA is all about hops, so your choice of hops varieties, quantities, and timing can make or break your beer. For bitterness, look to a clean variety such as Magnum, Nugget, or Galena that will deliver the alpha acids without getting in the way. Syringes of hops extract offer an intense dose of bittering without introducing vegetal matter into your kettle. These concentrated alpha-acid delivery vehicles are especially useful for big double IPAs in which bittering with actual hops would require an obscene amount of hops material.

The sky's the limit for flavor hops, aroma hops, and dry hops, but getting just the right blend requires knowledge and experimentation. SMaSH (single malt and single hop) beers are a great way to identify the characteristics that individual hops will bring to the party. By blending several different SMaSH beers in your glass, you can approximate how they might play together when you combine them in your IPA.

Hop bursting (the practice of adding generous amounts of hops in the final fifteen or so minutes of the boil) is a beautiful way

to introduce intense hops flavor and aroma without risking harsh bitterness. Just choose high alpha-acid hops for late-kettle additions and skip the bittering charge altogether. Good candidates for hop bursting include such potent varieties as Apollo, Bravo, Calypso, Citra, El Dorado, Mosaic, Simcoe, and Sorachi Ace.

When designing your hops regimen, consider aiming low—bitterness, that is. For a number of years, brewers have raced to make IPAs more and more bitter, but the trend is reversing and overly bitter IPAs stand out, but not in a good way.

One of the surest ways to prevent a great IPA from scoring well is to overthink the malt. Brewers sometimes have a tendency to throw in everything but the kitchen sink, but resist that temptation. By all means, include some crystal malt, but use a light malt and a lighter hand. Try flavorful base malts or include a small portion of Munich to add depth without sacrificing crispness.

A hallmark of any IPA is drinkability, but high-octane examples based exclusively on malt are likely to finish with a sticky sweetness that distracts drinkers and judges from the intense hops character. Double IPAs, and even many standard-strength IPAs, may therefore benefit from substituting a simple sugar such as dextrose for some of the malt base—some of the highest-rated commercial double IPAs we've reviewed here at Craft Beer & Brewing use dextrose to achieve the desired level of alcohol without excess malt body.

The classic yeast for American IPA is the



Chico strain (See “Yeast: A Force behind IPA 2.0,” page 81), which is prized for its clean, seen-but-not-heard character. You can’t go wrong with Wyeast 1056, White Labs WLP001, or Safale US-05.

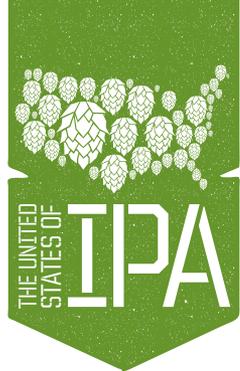
That said, beer judges are people, too. Objectivity is always the goal, but the reality of judging is that it’s easy for one citrusy, piney IPA to taste like the last citrusy, piney IPA. Offering the judges a unique experience that stands out from the rest of the flight automatically gives you a leg up. So consider using a more characterful American-ale yeast such as one of the increasingly popular New England strains. Conan, the best-known New England strain, is available as GY054 Vermont IPA from GigaYeast, as Vermont Ale from The Yeast Bay, or as WLP095 Burlington Ale from White Labs. ECY10 Old Newark Ale from East Coast Yeast could also be a good selection. It is supposedly the old Ballantine strain, presumably sourced before Sierra Nevada got hold of it.

Or let a British-ale strain have a go. Nick Arzner from Block 15 Brewing (Corvallis, Oregon) suggests that using an English ale yeast such as Wyeast 1098 can give your IPA a fuller body (see Nick’s Alpha IPA recipe, page 63). Just make sure your chosen strain fully attenuates.

Water is a key ingredient that may very well put your IPA ahead of the pack. Brewers who depend upon extract for fermentable malt sugars needn’t worry about it as much as all-grain brewers, but even extract-based IPA can sometimes benefit from water additions to help the hops pop.



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BJCP IPA Categories

Big changes are underway in the way the IPA style is judged in homebrew competition. The BJCP 2008 guidelines had three categories for IPAs:

- 14A. English IPA
- 14B. American IPA
- 14C. Imperial IPA

But as a sign of the strength and importance of the IPA style, the newly released

2015 BJCP guidelines offer no fewer than ten for IPAs:

- 12C. English IPA
- 21A. American IPA
- 21B. Specialty IPA, which includes specific subtypes for
 - Belgian IPA
 - Black IPA
 - Brown IPA
 - Red IPA
 - Rye IPA
 - White IPA
- 22A. Double IPA

Notice something missing? Yep, there's no category for Session IPA, even though that was the fourth-most-entered style among professional brewers at the 2015 Great American Beer Festival. So, for Session IPA, you'll have to go with an unqualified 21B Specialty IPA and specify that it's a session-strength American IPA.



Don't fly blind, though: If you don't know what's in your water to begin with, don't mess with it. But if your water report indicates that you're working with especially soft water, or if you need to start with reverse osmosis (RO) water, then consider using a water-chemistry tool such as Bru'n Water (sites.google.com/site/brunwater/) or the Mash Chemistry and Brewing Water Calculator at Brewer's Friend (www.brewersfriend.com). It may be that a bit of gypsum is all that's needed to take your IPA from good to outstanding (see "Water: The Overlooked Essential," page 75 for more about brewers' approaches to water in brewing IPAs).

Dial in Your Process

The only mash you need for American IPA is the trusty single-temperature infusion mash, which is perfectly suited to the well-modified malts used to brew these hoppy styles. To improve attenuation, try mashing on the lower end of the typical range: 150°F (66°C) isn't a bad place to start.

Boiling wort for a great American IPA need not be a complex affair, but as the number of hops additions increases, so does the risk of adding the wrong thing at the wrong time. Weigh out your hops into small bowls or cups and line them up in order with sticky notes or pieces of paper telling you exactly when each dose needs to go in.

IPA is best served fresh. You won't have the benefit of aging time that might normally smooth out minor injuries incurred during fermentation, so it's especially important to get fermentation right. Brewers of award-winning commercial styles emphasize the importance of pitching a large, well-oxygenated population of healthy yeast cells near the middle of the strain's preferred temperature range. Slowly increasing the temperature after a couple of days helps promote attenuation and reduce diacetyl in the finished product.

Dry hops are added after fermentation and are generally chosen to complement the late kettle hops. But dry hops can also provide interesting contrast, so consider dividing your batch of IPA into several smaller volumes and dry hopping each version a little differently, from obvious to esoteric. You may just discover a combination that surprises and delights you.

Nail the Submission Requirements

You've put tremendous time and effort into brewing the perfect IPA: Don't let a technicality disqualify your entry! Read and re-read the submission guidelines, and follow them to the letter. Most competitions require standard longneck bottles with no identifying marks, so keep that in mind.

Drop off your samples or ship them well in advance (not via the USPS: that's a felony) so that they arrive at the judging site before the deadline. But once the bottles leave your hands, try to relax as you await your results.

If you win a medal, congratulations! But don't be too hard on yourself if you don't. Instead, read the judge's comment sheets and take their suggestions to heart. Then go back to your recipe and try, try again. It may be that a few minor tweaks are all that stand between you and a gold medal.



DON'T JUDGE A BOOK BY ITS COVER

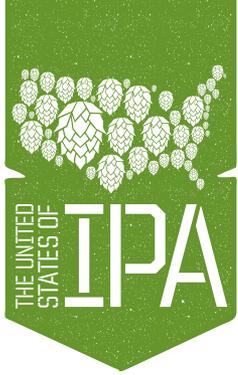
Once upon a time, a brewer or drinker could reliably identify a beer based on color and clarity—blonde ales were light gold, hefeweizens were cloudy, and IPAs were clear and amber. But today's brewers defy conventions with color and clarity across the map regardless of whether it's a session, regular, or double IPA. To show just how hard it can be to guess the beer based on looks alone, see if you can guess which beers each of these glasses corresponds to. Beers pictured, in no particular order, are:

- » **Speakeasy Baby Daddy Session IPA**
- » **Avery Raja Double IPA**
- » **Tree House Julius IPA**
- » **Left Hand Introvert Session IPA**
- » **Foley Brothers Fair Maiden Double IPA**
- » **Firestone Walker Easy Jack Session IPA**
- » **Avery IPA**
- » **Tröegs Blizzard of Hops**

Answers are in the lower left margin.



ANSWERS: 1. FIRESTONE WALKER EASY JACK; 2. AVERY RAJA; 3. FOLEY BROTHERS FAIR MAIDEN; 4. SPEAKEASY BABY DADDY; 5. AVERY IPA; 6. LEFT HAND INTROVERT; 7. TROEGS BLIZZARD OF HOPS; 8. TREE HOUSE JULIUS



WATER:

THE OVERLOOKED ESSENTIAL

Alas, water is to most IPA drinkers as *Arrested Development's* Ann Veal is to Michael Bluth (that is, the thing that's always around yet you're constantly forgetting about). And yet, water is essential to every IPA—every beer, in fact.

By Dave Carpenter

WATER IS THE FORGOTTEN step-sibling in the family of brewing ingredients. When malt and hops make their grand entrance into the fairy-tale ballroom, the string quartet stops and heads turn. Yeast is content to sneak in through the side door, but it remains always capricious, lead-stealing one moment and coyly fading into the shadows the next.

But water spends its evenings shuttling the other three from one party to the next, the unseen driver of an invisible carriage. Never in the history of civilization has a single drop of beer passed a pair of lips and prompted the imbiber to exclaim, “My, what a lovely sulfate-to-chloride ratio!”

And yet, water is essential to IPA and every other beer you've ever tasted. Just because we don't notice it doesn't mean it's unimportant. Brewers of Irish stout and Czech Pilsner have long understood that water can make or break a style. In the case of India pale ale, it was originally the water of Burton-upon-Trent that made possible the highly hopped brew of two centuries ago.

Today, American craft brewers churn out award-winning IPAs from sea to shining sea. But in a country as large and multifaceted as the United States, brewing IPA is hardly a homogeneous affair.

From the mountains to the prairies to fermentors topped with foam, the diversity of regional variations can be attributed, at least in part, to the ways in which brewers approach water.

Once upon a Time in Burton

Any discussion of water's role in defining IPA must necessarily begin with Burton-upon-Trent. While India Pale Ale's origin is shrouded in folklore as much as it is steeped in history, it is was in Burton that Samuel Allsopp & Sons and Bass & Company developed and marketed the inspiration for modern IPA.

Burton's pale ales and IPAs owed much of their character to the high-sulfate waters that brewers tapped into from local wells. With high levels of dissolved minerals, Burton water proved to be the ideal foundation for hoppy pale ale. In fact, Burton-brewed beers were sometimes

said to exhibit “Burton snatch,” a sulfuric aroma caused by copious concentrations of gypsum, or calcium sulfate.

You're unlikely to find that legendary Burton snatch in any of today's leading examples. But you'll still find brewers whose stylistic approaches are as tied to the local water as they are to malt, hops, and yeast.

West Coast

When one speaks of “West Coast IPA” as a distinct style, it's hard to not think of San Diego's Green Flash Brewing Company. After all, they named their flagship beer just that, a chicken-or-egg move that either planted a great idea in everyone's heads or succinctly captured what we were all thinking anyway, depending upon whom you ask.

“Our water is perfect for brewing very hoppy beers,” says Green Flash Brewmaster Erik Jensen. “I think that's one reason you see so many great IPAs coming out of San Diego.”

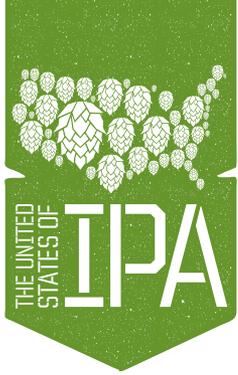
The local water, about two-thirds of which is sourced from the Colorado River, has a high mineral content that echoes what made Burton so successful. “We don't really treat our water at all,” says Jensen. “It's sort of in the tradition of the world's great styles, where brewers worked with the water they had and brewed beer that complemented it.”

But Green Flash's West Coast IPA, first brewed in 2004, is just one link in a chain of groundbreaking, ever hoppiest ales that includes such stalwarts as Stone IPA, AleSmith IPA, Ballast Point Sculpin, and countless others. Why did so many of these over-the-hops ales rise up from the West Coast? It seems there was something in the water. And not just San Diego's.



Never in the history of civilization has a single drop of beer passed a pair of lips and prompted the imbiber to exclaim, “My, what a lovely sulfate-to-chloride ratio!”





About 600 miles to the north, Bear Republic Brewing Company brews the highly decorated Racer 5 IPA, an archetype of the West Coast style. And the approach echoes that of Green Flash. “We’re fortunate to be part of the Russian River aquifer, so our water is high in mineral content,” says Brewmaster Richard Norgrove.

Like Jensen, Norgrove says he doesn’t have to change the water much to create hoppy styles. “There’s plenty of manganese,” he continues, “which contributes to a particular hops character that I think creates some of the regional differences between East and West Coast interpretations.”

Yes, like hip hop, swing dance, and oysters, IPA changes somewhat when you move three time zones to the right.

East Coast

“I couldn’t build a West Coast IPA if I wanted to.” That’s how Dan Foley, co-owner and co-brewer of Foley Brothers Brewing in Brandon, Vermont, responded when I asked him how he approaches his acclaimed American IPAs.

“We’re lucky in Vermont,” says Dan. “Our water comes from two aquifers, it’s non-chlorinated, and it’s low in sulfate. Nothing needs to be removed, and additions for IPA are simple.”

Dan explains that when he and brother Patrick first opened their brewery, they experimented with using the straight, non-adjusted water and sent samples off to labs for analysis. The water of the Green Mountains, it turns out, is considerably softer than that found out West.

“All we need to do is add some gypsum, which lowers the pH of the mash and brings up the sulfate-chloride ratio,” he says. As in Burton, elevated sulfate enhances crispness and highlights hops bitterness in Foley Brothers’ lineup of hops-forward ales, which include Fair Maiden Imperial IPA, Citennial IPA, Pieces of Eight Imperial IPA, and Native IPA.

Dan says that what makes East Coast

The water of Vermont’s Green Mountains, it turns out, is considerably softer than that found out West. “All we need to do is add some gypsum, which lowers the pH of the mash and brings up the sulfate-chloride ratio,” says Dan Foley of Foley Brothers Brewing. As in Burton, elevated sulfate enhances crispness and highlights hops bitterness in their lineup of hops-forward ales.



interpretations of the style unique is less about water—virtually any brewer can brew with any water nowadays—than it is about the approach to the hops themselves.

At Foley Brothers, the bittering charges are delivered almost exclusively with Magnum, a cultivar known for delivering a clean, smooth bitterness. Loads of late-kettle hops are further augmented with what Dan calls a “quasi hopback,” a sort of hop spider that lets him baste hops with recirculated wort right in the kettle.

Foley does adjust his water to brew hoppy styles, but one of the joys of soft water is that one can build up a desirable profile from scratch.

Working from a Blank Canvas

What are you to do, however, if you’re not as lucky as the good people at Foley Brothers, Bear Republic, or Green Flash? What if your water isn’t that great for drinking, much less brewing beer?

If your water leaves something to be desired, then starting with reverse-osmosis water may be the best approach. Similar in purity to distilled water, reverse-osmosis (RO) water has been forced through a semi-permeable membrane, leaving dissolved minerals on one side and H₂O, served neat, on the other. Starting with pure water, you then build the exact water profile you want through calculated mineral additions. (For

more about adjusting your water profile, see “Brewing Water,” *Craft Beer & Brewing Magazine*[®], Winter 2014/15.)

If you brew frequently and go through a lot of water, it may be worth installing an RO system. The convenience of having RO on demand can’t be beat, but such systems can easily run into the hundreds of dollars. And that’s before replacement filters, which can add up with time.

For a low-cost alternative to in-home systems, seek out your local grocery store’s bottled water aisle. Many have a machine right in the store from which you can fill your own containers for pennies per gallon. Of course, doing so requires a trip to the store, but it’s a small price to pay for better beer.

Something in the Water?

The days when the water from the tap limited the beer that you brewed are long gone. Today’s brewers are free to start with a blank canvas and build up custom profiles to accentuate whatever characteristics they desire. It’s thus comforting to hear brewers such as Foley, Jensen, and Norgrove use words like *lucky*, *fortunate*, and *perfect* to describe their water sources because despite regional differences, the two coasts (and all of us in the middle) are united in our love for modern American IPA.



PHOTO: MATT GRAVES

YEAST:

A FORCE BEHIND IPA 2.0

Today's most creative craft brewers know how to select yeast strains that don't just ferment maltose, but also dance alongside hops that are at once tropical, citrusy, earthy, piney, and floral. **By Dave Carpenter**

CONAN. PACMAN. CHICO. DENNY'S

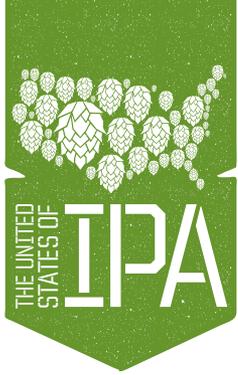
Favorite. These are not, as the uninitiated might initially suspect, terms for the Mountain Time Zone's most popular cannabis products. These are, in fact, names that have been lovingly bestowed upon distinct strains of *Saccharomyces cerevisiae*: good ol' ale yeast.

Just as poodles and Great Danes reflect the selective pressures that breeders have placed upon *Canis lupus familiaris*, individual yeast strains express the cumulative effects of centuries of environmental adaptation and random mutation. Beer nerds sometimes describe certain styles as "yeast-driven," meaning that yeast expression is a critical aspect of the finished product. English bitters, Hefeweizen, and most Belgian-inspired styles find themselves huddling beneath this umbrella.

Brewers of such styles will get into heated debates about the relative merits of yeasts from Westmalle or Chimay, Dupont or Thiriez, Weihestephan or Schneider. Brewers of American India pale ale, however, have long specified a crescendo of exceptionally precise hops additions, only to close with a predictable denouement: "Ferment with American ale yeast."

Admittedly, we know what that means (more on that in a minute), but American IPA ain't what it used to be. Today's most creative craft brewers know how to select





yeast strains that don't just ferment maltose, but also dance alongside hops that are at once tropical, citrusy, earthy, piney, and floral. The trick is knowing what you want and then experimenting until you get it.

And knowing what you want from your yeast is a major driving force behind IPA 2.0.

Châteaux de Chico

There are plenty of American-ale yeasts out there. But just as we use Q-Tip and Kleenex to identify cotton swabs and facial tissues of any brand, talking about "American-ale yeast" means only one thing: Chico.

Chico is probably the most widely used craft yeast strain on the West Coast, if not in the entire country. You know it as White Labs California Ale (WLP001), Wyeast American Ale (1056), or Safale US-05. "Chico" refers to the hometown of Sierra Nevada Brewing Company, from which the strain is said to have been sourced. Legend has it that Sierra Nevada, in turn, obtained it from Ballantine decades ago. Whence it arrived at Ballantine may forever remain locked in the vaults of brewing lore.

Whatever its roots (and inevitable mutations along the way), Chico is famously clean, meaning that fermentation by-products are relatively few. Thus, the West Coast IPA drinker experiences a more or less unadulterated expression of malt and hops. But despite Chico's clean reputation,

it can, in fact, throw impressive esters when it ferments above or below its preferred temperature range.

"These [West Coast] yeasts have a potential ester profile. If you play with fermentation temperature, you can really influence the character of the beer," says Richard Norgrove of Bear Republic Brewing Company (Healdsburg, California). He's partial to White Labs WLP051 California Ale V, which is somewhat more expressive than classic Chico yeast ("Hmm, where did that guy get that number?" asks the award-winning brewer of Racer 5 with a chuckle upon mentioning Cali V).

"If you ferment California Ale V at 66–68°F [19–20°C], say, it's not going to throw tremendous esters. But raise it to 72–74°F [22–24°C], and that same yeast can throw bubblegum and Juicy Fruit character into the beer, giving a round sweetness that complements the hops profile."

Norgrove knows a thing or two about integrating interesting flavors. While Racer 5 remains a classic interpretation of the West Coast IPA style, Bear Republic's Apex imperial IPA is a chance to play. "We reserve the right to change Apex each year according to the hops that are available," he tells me. Right now, his favorite hops is a new cultivar known only as Experimental Hop 06277. He has nicknamed it Stitch for its ability to seamlessly weave in and out of Apex's hops profile and keep beer drinkers guessing. And it seems to work well with the brewery's house yeast strain.

Because Bear Republic's beers are bottle conditioned, the interaction between yeast character and hops profile changes with time. "Everyone at Bear Republic has a favorite way to drink Racer 5," he says. For Norgrove, that's three to four months after production. "The hops no longer dominate, and you start to get some esterification. It becomes almost more English in style."

Hmmm! A West Coast IPA that tastes English?

English Accents

Erik Jensen of Green Flash Brewing Company in San Diego thinks a key differentiator for East and West Coast brewers of IPA may be the lineage of their preferred yeast strains. Green Flash's proximity to White Labs affords him the opportunity to taste a number of the yeast bank's experiments, which often include splitting a single batch of wort and fermenting it with multiple yeast strains. Each resulting beer gets tested for a number of key metrics, including International Bittering Units (IBUs).

"A beer that hits 50 IBUs with a California-ale strain might only come up as 35 IBUs when fermented using a British-ale strain, even though the original wort is the same," says Jensen.

It seems that the house strains that have developed at East Coast breweries may enjoy a more direct lineage to classic British strains than those on the West Coast. The Alchemist's well-known Conan strain, for example, was begat from one of brewing legend Greg Noonan's preferred yeasts at the Vermont Pub and Brewery. In all likelihood, Noonan's strain had its origins in the United Kingdom, but as with Chico, Conan's actual family tree may very well be lost to the ages.

Whatever the case may be, it's undeniable that many of the best IPAs from the East Coast exhibit a qualitatively different bitterness and hops presence than their West Coast counterparts. Neither is innately better or worse than the other. Rather, they

Richard Norgrove of Bear Republic Brewing Company says, "If you ferment California Ale V at 66–68°F [19–20°C], say, it's not going to throw tremendous esters. But raise it to 72–74°F [22–24°C], and that same yeast can throw bubblegum and Juicy Fruit character into the beer, giving a round sweetness that complements the hops profile."



It's a Matter of Yeast

In "Gather No Moss: The Perpetual Evolution of Heady Topper" (*Craft Beer & Brewing Magazine*, Issue 1 (Spring 2014), Stan Hieronymus explained the interplay between yeast and hops:

John Kimmich, the mastermind behind The Alchemist brewery and Heady Topper double IPA, acquired the Alchemist house yeast strain, known as "Conan" as well as VPB1188, when he worked at Vermont Pub and Brewery. Over time it evolved into his own, just as Vermont Pub and Brewery founder Greg Noonan made it his own after acquiring it from English sources. Kimmich particularly likes the apricot and tropical fruit aromas this strain produces, a combination of the esters that result after yeast creates alcohol and the hops-derived aroma compounds that evolve during the fermentation process (called biotransformations by brewing scientists). However, Kimmich is pretty confident that he could give Alchemist Heady Topper a West Coast hops character more like a Double IPA from San Diego if pressed to do so.

How? Well, once, when tasting and discussing yeast experimentation with Shaun Hill (of Hill Farmstead Brewery), Kimmich speculated about fermenting his own beer with White Labs California Ale Yeast (WLP001) instead of his own VPB1188. When asked about why he would do that, he replied, "That's simple. We're taking Heady to the profile of a San Diego IPA."

"A beer that hits 50 IBUs with a California ale strain might only come up as 35 IBUs when fermented using a British ale strain, even though the original wort is the same," says Erik Jensen of Green Flash Brewing Company of yeast experiments at White Labs.



assure full attenuation. "Our dry-hop regimen is also fast," Foley observes. "We'll do a single dry hop for standard IPA and a double addition for double IPA."

Foley also advises brewers to keg their beer if at all possible. "We started out by bottle conditioning, and the warm carbonation period seemed to age the beer and degrade the hops profile." Kegging lets him keep the beer cold, which is crucial for preserving delicate hops flavors and aromas.

East Coast and West Coast brewers are both fanatical about freshness, which means that in the end, we all win, no matter the yeast strain.

A Yeast for the Senses

There's no right or wrong way to brew IPA, as long as consumers continue to enjoy the products that today's brewers are so carefully crafting. Yeast selection certainly makes a difference, but even the perfect strain won't deliver if it's treated poorly. But given the right combination of oxygen, pitch rates, fermentation temperature, and, yes, yeast strain, the dedicated IPA brewer can turn out a work of art. And that's something we can all get behind, no matter where we live.

represent two different approaches to the same overarching style (see "It's a Matter of Yeast," at right, for more insight into the yeast-hops interaction).

Sixty miles south of The Alchemist, Dan Foley of Foley Brothers Brewing (Brandon, Vermont) admits to using not just one yeast strain but a blend. "The yeast strain absolutely has a big impact," he says. "We pitch a ton of yeast with lots of oxygen so that our IPAs ferment out in just three or four days."

Foley believes in getting his IPAs from grain to glass as quickly as possible. That means fast fermentation and quick conditioning. The Foley brothers like to ferment their IPAs in the high sixties Fahrenheit (about 20°C) and then raise the temperature to the low seventies (about 22°C) near the end of fermentation to

PHOTO: MATT GRAVES



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Tasted

The bitterness battle is over as brewers instead pivot to explore the wide range of flavors available in hops today. Our tasting panel revisited **American IPAs, double IPAs,** and **session IPAs** to explore just how far brewers have pushed the styles.

INSIDE CB&B

How We Taste & Test

Reviewing beer may sound like a dream job, but our tasting and review panel takes the role seriously. Composed entirely of Beer Judge Certification Program (BJCP) judges who have all studied, trained, and been tested on their ability to discern characteristics in beer, our panel is independent and doesn't include any CB&B editors or staff. The panel tastes all beer blindly—they do not know what brands and beers they are tasting until the tasting is complete.

Our goal is to inform you about the strengths and weaknesses of these beers as well as their relative differences (not everyone has the same taste in beer, so accurate descriptors are more valuable than straight numerical values). The quotes you see are compiled from the review panel's score sheets to give you a well-rounded picture of the beer.

As our reviewers judge, they score based on the standard BJCP components: Aroma (max 12 points), Appearance (max 3 points), Flavor (max 20 points), Mouthfeel (max 5 points), and Overall Impression (max 10 points). We've listed these individual component scores, and the bottom-line number is derived from adding then doubling these component scores to produce a rating on a 100-point scale. *Note that we've rounded the printed component scores to the nearest whole number, so the math won't necessarily add up.*

Our judges use the following scale in valuing scores:

- 95-100 » Extraordinary**
World-class beers of superlative character and flawless execution
- 90-94 » Exceptional**
Distinguished beers with special character, style, and flavor
- 85-89 » Very good**
Well-crafted beers with noteworthy flavor and style
- 80-84 » Good**
Solid, quality, enjoyable beers
- 75-79 » Above Average**
Drinkable and satisfactory beers with minor flaws or style deviations
- 70-74 » Average**
- 50-69 » Not recommended**

We'd like for you to keep one thing in mind as you read these reviews—your perception of a beer is more important than that of our review panel or editorial staff, and reading reviews in a magazine (or on the Web or in a book) is no substitute for trying the beer yourself.



10 Barrel Joe IPA

| ABV: 6.8% | IBU: 70 | SRM: N/A |

What the brewer says

"Meet Joe IPA, formerly Sam, named after the hops Simcoe, Amarillo, and Mosaic. Joe packs a full-on hops punch in the face."

What our panel thought

Aroma: "Moderate citrus with light pine and big tropical notes of mango, tangerine, and pineapple with hints of some Juicy Fruit, even. Noticeable sweet maltiness that's not over the top."
Flavor: "Grapefruit, some tangerine, and light pineapple backed by moderate resinous dank hops and a bit of malt sweetness, big mouth-filling carbonation. A very clean beer that allows some pleasant hops flavors to shine through without showing off."

Overall: "There's a nice rhythm to this one, where the aroma flows into the flavor and just keeps flowing from aftertaste to the next sip and so on. The juicy fruity goodness on the nose and palate blends nicely with the earthy/dank aftertaste for an unusual, but satisfying drinking experience. Slightly subdued but incredibly drinkable—this is the beer you settle down with after getting burned by all those flashy IPAs, with their fast cars, tattoos, and promises of exotic flavors."

Aroma: 12
Appearance: 3
Flavor: 20
Mouthfeel: 4
Overall: 10

98



21st Amendment Brew Free! Or Die

| ABV: 7% | IBU: 70 | SRM: N/A |

What the brewer says

"This aromatic golden IPA is brewed with some serious West Coast attitude. It starts with three different hops to the nose, quickly balanced by a solid malt backbone supporting the firm bitterness."

What our panel thought

Aroma: "A strong interplay between some floral hoppiness and malty sweetness give a sense of fresh honey and additional notes of light grass, banana, orange, and peach. Light earthy/resiny hops, moderate malt, and a touch of toast and caramel."
Flavor: "Juicy tropical fruits, oranges, and peaches with a hint of vanilla? An adequate malt body adds hints of toast and a bit of sweetness that carries into the finish. The finish flirts with bitterness, but that small bit of honey sweetness helps keep it in check. Despite the perceived sweetness, it's remarkably dry, and the bitterness helps balance it."

Overall: "A well-brewed take on an IPA that's both fun and uncommon. The interplay of malt and hops is well crafted, and this is a great example of an IPA that uses the malt to its advantage with supporting earthy hops bitterness and floral fun."

Aroma: 12
Appearance: 3
Flavor: 20
Mouthfeel: 4
Overall: 10

97



Almanac IPA

| ABV: 7.5% | IBU: N/A | SRM: N/A |

What the brewer says

"California 2-row, German Vienna, crystal, and biscuit malts combine with Apollo, El Dorado, Simcoe, and Mosaic hops to create an IPA with intense aromas of grapefruit and tangerine peel, melon, pineapple, and pine trees."

What our panel thought

Aroma: "Lots of fruit character—pine, grapefruit, slight orange—backed by some biscuity notes, a hint of pine, and an unexpected moderate spicy note with peppercorn."
Flavor: "A blend of tropical fruit flavors including mango and pineapple, atop a slightly resinous pine foundation. Biscuity malt character is just sweet enough to balance the bitterness, which is firm but doesn't get in the way. Slight mint and a little onion add depth under the juicy character. Aftertaste is bitter and long lasting, doesn't grow but stays with you."

Overall: "This beer strives for a rational and luscious compromise between New England soft fruitiness and West Coast dry bitterness. It gives the discerning drinker the best of both worlds and invites sip after sip. Why choose when you can have it all?"

Aroma: 11
Appearance: 3
Flavor: 19
Mouthfeel: 4
Overall: 10

92



Alpine Duet

| ABV: 7% | IBU: N/A | SRM: N/A |

What the brewer says

"A West Coast IPA that features Amarillo and Simcoe hops "in harmony," giving a bright, floral aroma. Duet is nicely bitter with the perfect amount of malt concealed behind the hoppy goodness."

What our panel thought

Aroma: "Hops, hops, hops! Tons of floral, fruity, myrcene backed up with honeysuckle sweetness. This is what I want in an IPA—candy-like hops aroma of orange juice, lemon, apricot, pineapple and a subtle dank note with a light biscuity malt sweetness."

Flavor: "A stellar blend of malt sweetness and fruit-forward hops (tangerines, pineapple, kiwi, grapefruit). Bitterness is spot on providing an excellent contrast and cleansing the palate without diminishing the hops candy character. Lots of orange, lemon zest, pineapple, clementine, pine. Finishes dry and bitter, yet somewhat balanced and restrained."

Overall: "This is a fantastic IPA that finds a way to stand out in an overcrowded category, showcasing extremely complex fruity hops character and a restrained bitterness that helps keep it drinkable and more enjoyable with each sip. This beer represents the most exciting potential of the future of IPAs."

AROMA: 12
APPEARANCE: 3
FLAVOR: 20
MOUTHFEEL: 5
OVERALL: 10

99



Avery IPA

| ABV: 6.5% | IBU: 69 | SRM: N/A |

What the brewer says

"Colorado's hoppiest pale ale, Avery IPA demands to be poured into your favorite glass to truly appreciate the citrusy, floral bouquet and the rich, malty finish."

What our panel thought

Aroma: "A fruity nose with hints of black currant and boysenberries. Some herbal, anise-like presence. Dank, catty hops character dominates."

Flavor: "A definitive malt presence that is well-balanced by an assertive, but not overpowering bitterness. Some corn-chip flavors detract. The hoppiness is much like the aroma with lots of berries and herbs. Light but discernable off flavors of acetaldehyde and DMS and a light metallic finish. The expected hops flavors are there—pine, lemon, grapefruit—but a difficult tannic and astringent note competes with the more pleasant flavors."

Overall: "The malt/hop balance is right, but the hops flavors lack complexity and feel dated (not wholly enjoyable) while the corn flavor detracts from the overall experience. Finishes slightly astringent and bitter in a way that hints of issues with fermentation and malt."

AROMA: 10
APPEARANCE: 3
FLAVOR: 14
MOUTHFEEL: 3
OVERALL: 8

74



Ballast Point Sculpin

| ABV: 7% | IBU: 70 | SRM: N/A |

What the brewer says

"Sculpin IPA showcases bright flavors and aromas of apricot, peach, mango, lemon. The lighter body also brings out the crispness of the hops."

What our panel thought

Aroma: "Super piney and resinous with a very light caramel sweetness. A basic tension between candy-like citrus and floral notes set against green, dank, and white-wine aromas."

Flavor: "Very bright with aggressive piney hops flavors, moderate malt, a slight garlic flavor, and grapefruit and pine notes. Dialed-in bitterness hits the mark. Lots of hoppy goodness with lemon candy, green, and floral notes. Delicious. Juicy hops notes with hints of tangerine, lemon candy, green and floral notes, plus balancing pine and dankness."

Overall: "Lovely resinous character well-balanced by the malt sweetness. Drinks like the stronger side of IPA, bordering on double IPA. A well-crafted blend of malt, hop, and alcohol—exactly what an IPA should be. Complex hops character with an exciting blend of classic and contemporary hops character. A full-bodied, full-flavored IPA with tons of nuance with each sip. This is extremely well executed—a great beer."

AROMA: 12
APPEARANCE: 3
FLAVOR: 19
MOUTHFEEL: 5
OVERALL: 10

99



Bells Two Hearted Ale

| ABV: 7% | IBU: N/A | SRM: N/A |

What the brewer says

"Hopped massively... with Centennial hops... for their characteristic grapefruit and pine resin aromas. A significant malt body and the signature fruity aromas of Bell's house yeast balance the hops."

What our panel thought

Aroma: "Orange peel, clove, citrus, and fruitcake with a slight earthy grassiness and mild malt biscuit-like sweetness. Some grapefruit, some mango, and pineapple. A little lemon and a little orange are present on the nose with a slight herbal note."

Flavor: "Spicy rye-like character with hops-driven flavors of orange, mango, and peach. Solid malt structure with substantial body and residual sweetness to keep bitterness in check. Excellent creamy mouthfeel. Big sweetness up front with almost a low caramel note. On the second sip, the sweetness faded, and the malt balanced perfectly with the fruity hops and slight bitterness."

Overall: "A nicely integrated IPA—the beer delivers a unifying impression of fruit and malt. Rich and juicy hops flavors of grapefruit, pineapple, and lemon notes with a bitterness that rounds out the taste. Everything is well-balanced."

AROMA: 12
APPEARANCE: 3
FLAVOR: 18
MOUTHFEEL: 5
OVERALL: 10

96



Breakside IPA

| ABV: 6.3% | IBU: 74 | SRM: N/A |

What the brewer says

"Classic craft beer of the Pacific Northwest. Notes of evergreen, citrus, and tropical fruit."

What our panel thought

Aroma: "Juicy fruit salad with mango, pineapple, slight earth, pine, and perhaps a little toffee. Very slight cooked egg aroma. As it starts to warm there is a bit of garlic note and the egg note dissipates."

Flavor: "Tropical fruit up front, a little garlic, and herbal, oregano-esque notes. Slight malt sweetness with hints of caramel. Definitive bitterness, but not at all harsh. Rich hops flavor with pine and low garlic notes upfront and a nice bitterness that extends into the after-taste but doesn't continue to grow—it fades nicely. Medium sweetness at the end rounds out the sip. I really enjoy the balanced finish."

Overall: "Moderate bitterness and balanced sweetness are set against grapefruit and mild garlic notes. A solid, reliable IPA that I'd be happy to drink any day of the week. Easy drinking, light, and perfectly refreshing—it's well suited for outdoor activities in warmer weather. The beer opens up and improves as it warms."

AROMA: 11
APPEARANCE: 3
FLAVOR: 18
MOUTHFEEL: 4
OVERALL: 9

90



Breckenridge Brewery Breck IPA

| ABV: 6.3% | IBU: 66 | SRM: N/A |

What the brewer says

"Scrutiny of ingredients and experimentation with process resulted in a distinctively pleasant floral aroma with crisp hops flavor that's mellowed by Full Pint malt."

What our panel thought

Aroma: "Intense orange and zest with light lemony character and faint grassiness. Candied sweetness akin to General Tso's chicken sauce (without the chicken). A touch of malty sweetness and faint estery notes that may be yeast or hops. A very unique and curious aroma for the style."

Flavor: "Juicy orange flavors, followed by moderate caramel and a long, pleasant bitterness. Similar to aroma, the hops flavor is floral and slightly herbal with a bit of that butterscotch-candy flavor up front. Prominent bitterness, but cut by the malt so as not to induce dry mouth."

Overall: "An enjoyable IPA that hints at adventure but ultimately remains cautious (in a good way). Lovely orange character is refreshing—a unique and tasty IPA that would stand out from other more citrus-hop-driven IPAs of current popularity. The touch of banana in the middle is interesting and works with the toasty notes."

AROMA: 12
APPEARANCE: 3
FLAVOR: 18
MOUTHFEEL: 4
OVERALL: 9

92



Creature Comforts Tropicalia

| ABV: 6.5% | IBU: N/A | SRM: N/A |

What the brewer says

"A balanced, soft, and juicy IPA. Ripe passion fruit and citrus hops aroma lead to a full, fruit-forward hops flavor that washes over the palate, ending with subtle bitterness."

What our panel thought

Aroma: "Lots of lemon and pine with a hint of floral notes and a touch of black pepper. Very fruity aroma with hints of strawberries, peaches, and pears plus aromas of peanut butter and bread yeast. Floral, dank, resinous hops character and a hint of tangerine."

Flavor: "Balanced (for an IPA), with a hint of residual sweetness. Rich hops flavor (resin, pine, citrus, grapefruit, tropical fruit) matched with a pleasant bitterness and proper malt background. Low IBUs are not as palate-cleansing as some other IPAs, but let the fruity hops notes shine."

Overall: "Something a bit different... a touch of crystal malt adds biscuity sweetness and complexity. Hops throw alternating layers of lemony and floral flavors. An excellent, complex modern take on the American IPA style with a well-constructed malt bill that brings out the best in the hops. Very well executed and worth seeking out."

AROMA: 11
APPEARANCE: 3
FLAVOR: 19
MOUTHFEEL: 4
OVERALL: 10

97



Deschutes Pinedrops

| ABV: 6.5% | IBU: 70 | SRM: N/A |

What the brewer says

"This IPA delivers a crisp and light malt body with ample citrus and pine notes from Chinook and Equinox hops. Inspired by the aromas and silence we experience in the pine forests near our brewhouse."

What our panel thought

Aroma: "Floral aroma—almost lavender—with a light lemony background. Floral fades as it warms, and it morphs into more of a citrusy grapefruit. Some pear cocktail with lemon rind and even tangerine notes up front. A touch catty and floral but gives way to resinous piney notes."

Flavor: "Very strong lemony flavor—bright and citrus-focused with light floral flavors in the finish. Not at all what I was expecting based on the aroma. The finish has a lingering bitterness that borders on astringent. Some catty, black currant notes and just a hint of malt sweetness."

Overall: "Despite the weird and overpowering aroma, I was pleasantly surprised to find a powerful, lemon-focused hops flavor with enough bitterness to keep the malt profile in check. Shows flashes of greatness, but the high bitterness detracts from the overall. Dial back the IBUs to make it a bit more drinkable and I'll buy a lot."

AROMA: 12
APPEARANCE: 3
FLAVOR: 17
MOUTHFEEL: 4
OVERALL: 9

90



Foothills Jade IPA

| ABV: 7.4% | IBU: 86 | SRM: 4.1 |

What the brewer says

"Bold, citrusy Pacific Jade hops lend striking tropical fruit notes and a hint of peppery finish to this easy-drinking IPA. Dry hop additions of Chinook and Citra add heady aroma and bold flavor."

What our panel thought

Aroma: "Citrus, orange, nice juicy fruit notes with biscuit sweetness. Lemon, thyme, pine, and a faint grainy sweetness. Floral honey."

Flavor: "Intriguing sweetness and juicy fruit character in this beer. Nice citrus notes of orange, grapefruit, and lemon. The bitterness is measured with the malt and hops sweetness for a delicate, delightful malt backbone. Floral honey and lime citrus notes up front—a very different profile than what we have had so far. Almost a light acidic note with a touch of salt reminiscent of a gose. Dry aftertaste with medium bitterness that intertwines with that acidity."

Overall: "A very enjoyable IPA—fruity, juicy, and flavorful. Spritzy, playful, and fun. It delights the senses while remaining drinkable. Big citrus notes with lemon and lime with a slight acidic note that is complementary not distracting. Unique combo of citrus and acidity helps it stand out in a crowded field."

AROMA: 11
APPEARANCE: 3
FLAVOR: 19
MOUTHFEEL: 4
OVERALL: 10

95



Fort George The Optimist

| ABV: 6.2% | IBU: N/A | SRM: N/A |

What the brewer says

"With its radiant golden body, a lively buoyant head, and floral aroma, your glass will always be half-full."

What our panel thought

Aroma: "Some fruity citrus character with orange, pineapple, slight pine, green onion, garlic, grapefruit, and pine trees... what an interesting forest this is!"

Flavor: "More spring onions, garlic, citrus, and pine. A slight caramel sweetness offers support and rounds out the body. Nice creamy mouthfeel and a smooth bitterness. Aftertaste is dank, mostly with slight onion. As it warms the breadly sweetness comes up a little with slight citrus notes."

Overall: "This beer is well integrated, and the sweetness to bitterness provide a good balance, finishing slightly bitter in the end to keep you going back for another sip. An unusual IPA, but that doesn't mean a bad IPA. Consumers looking for something to challenge the palate will appreciate the interesting combination of flavors this beer has to offer. Don't judge it by the initial aroma or the first sip. Give it some time: It may just grow on you."

AROMA: 11
APPEARANCE: 3
FLAVOR: 18
MOUTHFEEL: 4
OVERALL: 8

86



Fremont Interurban IPA

| ABV: 6.2% | IBU: 80 | SRM: N/A |

What the brewer says

"Interurban offers the adventurous beer lover a warm embrace of roasted pale malt swirled with a hand-selected blend of flavor malts and filled with the rich spice of Chinook, Centennial, and Amarillo hops."

What our panel thought

Aroma: "Some sweet malt and pepper spice-like character. Mild grassy and earthy note of hay and citrus. Muted hops note up front with medium perfume note. As it warmed and opened up that went away, and a big hops grapefruit with slight dank notes came out."

Flavor: "Biscuit malt sweetness hits up front and then carries to an earthy spice hops character with some grapefruit and slight citrus notes. Flavor is not what the aroma suggests. Grass is still there, plus some mangoes. Caramel malt body is lovely, but the long bitter finish leaves a lingering harshness on the back of the tongue. Wine-like notes up front with moderate perfume notes."

Overall: "The more I drank this beer the more I enjoyed it. It is slightly rough around the edges with the malt and hops but it's a good American IPA that will neither offend nor impress. It would score higher if the bitterness were smoother."

AROMA: 10
APPEARANCE: 3
FLAVOR: 18
MOUTHFEEL: 4
OVERALL: 9

87



Funky Buddha Hop Gun IPA

| ABV: 7% | IBU: 80 | SRM: N/A |

What the brewer says

"Hop Gun IPA delivers a payload of American hops to your palate, bursting forth with the flavors of grapefruit and pineapple. A careful dose of smooth caramel malts swoops in to balance out the finish."

What our panel thought

Aroma: "Juicy, juicy, juicy! It's like sniffing a bowl of assorted fresh fruits. Just delightful. Big piney notes up front with slight honey sweetness and a slight musty note. As it warms, more sweetness than hops, light barleywine-like notes with dark fruit such as plum."

Flavor: "Plenty of fruit to go around—passion fruit, mango, bananas, pineapple. Delightful malt character delivers on flavor but tastes just a touch thin on the tongue. Bitterness is there but merely lurks in the shadows."

Overall: "Slight graininess distracts at first sip. Perhaps this is from a hop? A lovely fruity IPA that will satisfy hopheads but could also be a nice introduction to the style for those who don't enjoy traditionally "hoppy beer." Little of the harsh bitterness that might turn newbies away—it's all smooth fruit. Would prefer just a touch more residual sweetness and body, but that's a minor complaint."

AROMA: 11
APPEARANCE: 3
FLAVOR: 17
MOUTHFEEL: 4
OVERALL: 9

87



Golden Road Point the Way IPA

|| **ABV:** 5.9% | **IBU:** 60 | **SRM:** N/A |

What the brewer says

"Our ode to the hops-crazed patrons of Los Angeles. Its light malt body elevates the citrus zest, tropical, and pine notes contributed by a generous hops dosing. This West Coast IPA finishes dry."

What our panel thought

Aroma: "Freshly zested lemon and grassy hops aromas with a light malt sweetness. Pine, grapefruit, and tangerine with some floral notes. Fruity—peach and melon with a hint of lemon zest. No green hops aroma."

Flavor: "Very bright at the front of the palate, fades very quickly. Moderate lemon, grass, and grapefruit flavors with just enough bitterness that drops into a dry finish. Almost effervescent with a slight carbonic bite. Malt body is light but enough to support the moderate hops profile. Piney and spicy with slight peppery notes. Very clean finish with a long-lasting bitterness."

Overall: "Bright and refreshing with just enough malt body to stay in balance. A superbly 'clean' beer with just the right amount of bitterness to let you know it's an IPA without overpowering the flavor hops. A great lawnmower beer with less apparent alcohol level, built for drinking more than one."

AROMA:12
APPEARANCE:3
FLAVOR:19
MOUTHFEEL:4
OVERALL:10

97



Great Divide Titan IPA

|| **ABV:** 7.1% | **IBU:** N/A | **SRM:** N/A |

What the brewer says

"Titan IPA is big and aggressively hopped, brewed for hops disciples. It starts out with piney hops aromas and citrus hops flavors, and finishes with a rich, malty sweetness that is balanced with crisp hops bitterness."

What our panel thought

Aroma: "Herbal and yeasty with fruity esters. Earthy, almost musty character. A moderate level of floral, earthiness comes through up front. Overall, fairly subdued for style."

Flavor: "More balanced toward the malt than most American IPAs. Honey-like sweetness with supporting caramel and light brown sugar. Robust bitterness does its job but doesn't get in the way. The flavor is much brighter than the aroma with pleasant floral and pine notes that are well-balanced with a complex malt character. Light bread crust, biscuit, and even wheat sweetness."

Overall: "An IPA for the ESB crowd—not your typical American IPA hops bomb, but a distinguished take on the style. The beer didn't do much to entice me with the aroma, but made up for it with delicious flavor and complexity. A more subtle interpretation of the style, but well crafted all the same."

AROMA:10
APPEARANCE:3
FLAVOR:19
MOUTHFEEL:4
OVERALL:9

92



Green Flash Soul Style IPA

|| **ABV:** 6.5% | **IBU:** 75 | **SRM:** N/A |

What the brewer says

"Citra, Simcoe, and Cascade hops are layered, allowing bright tropical waves of citrus and floral notes to break gently on the palate. Get stoked on a laid back single and ride a wave to soothe your soul."

What our panel thought

Aroma: "Hints of grapefruit, pine resin, and subtle dank hops character. A very subtle malt sweetness underneath the hops, but only faint and not competitive."

Flavor: "Very malt-forward profile for an IPA, with caramel and honey plus a hint of sherry oxidation, solvent, or metallic. The bitterness is well-balanced, delivering the bite you want without being painful, but hops flavor is really subdued. Hints of lemon pith and herbs. Finish is mostly bitter and somewhat dry, yet not out of balance or over the top."

Overall: "The hops chosen are interesting, but the malt profile has trouble supporting the bitterness despite it being a very malty IPA that harken back to earlier IPA times. Not as flavor-forward in the hops as other contemporaries—not off, but simply less exciting. Well executed though and very refreshing."

AROMA:11
APPEARANCE:3
FLAVOR:16
MOUTHFEEL:4
OVERALL:9

84



Half Acre Gone Away IPA

|| **ABV:** 7% | **IBU:** N/A | **SRM:** N/A |

What the brewer says

"We conjured the classics and then laid them on a bed of pale malt. This IPA shoots straight to the bitter edge before falling into a mellow haze. Deep gold and ready to travel into the distance."

What our panel thought

Aroma: "Light citrus, caramel, a touch of floral, moderate tangerine, and a grounded earthy note. Lively citrus and bright pine that steers clear of sticky and resinous. Bright dankness. Very assertive."

Flavor: "Earthy and piney with a slight honey-like malt sweetness and a well-constructed bitter profile that pushes to the edge of harsh without going over it. Citrus notes are more zesty than fruity. As aggressive as the aroma was, the flavor is quite rounded and approachable. A mild grapefruit-rind note helps it from going too far into the forest."

Overall: "Fun earthy/piney IPA with a light malt backbone. An enjoyable and lively IPA that would be nice with grilled fish and a kale salad. It's bright, light, and could even be a nice crossover craft selection for non IPA drinkers who don't mind a little challenge. A tasty beer that surprises and delights."

AROMA:11
APPEARANCE:3
FLAVOR:19
MOUTHFEEL:4
OVERALL:10

94



Hardywood The Great Return

| **ABV:** 7.5% | **IBU:** 70 | **SRM:** N/A |

What the brewer says

"Bold, resinous, and bursting with bright grapefruit aroma, this IPA is a tribute to the decades of hard work by conservationists to restore the James River."

What our panel thought

Aroma: "Although I can't pinpoint it, reminds me of eating chicken wings—perhaps it's the spices in my blue cheese or ranch dressing? As it warms, high spicy, thyme-like notes. Curious tropical notes of guava, dulce de leche, banana, and plums. Coconut and vanilla."
Flavor: "Moderate bitterness with a bit of spicy notes supported by a bit of biscuity malt. A slight hint of fall spices—annatto seed, bitter orange, toffee, and a long, long bitterness. Substantial malt structure supports the hops character well."

Overall: "An enjoyable, well-put-together IPA. Lower bitterness but significant flavor hops profile. A moderately heavy beer on the tongue with low carbonation. I would pair this beer with something spicy and see if I can bring out more of the spices. With its pronounced annatto seed and bitter orange flavors, this is the perfect pairing for *Yucatecan cochinita pibil*."

AROMA:11
APPEARANCE:3
FLAVOR:19
MOUTHFEEL:4
OVERALL:10

94



Harpoon IPA

| **ABV:** 5.9% | **IBU:** 42 | **SRM:** N/A |

What the brewer says

"Our IPA finds harmony in the combination of hops, malt, and yeast. The sturdy malt backbone provides depth of body and color and is balanced by a pleasantly hoppy finish."

What our panel thought

Aroma: "Interestingly complex and subtle nose of malt sweetness, musky hops character, and slight fruit notes. Slight grapefruit note as it starts to warm up, but not overly fruity."
Flavor: "Orange zest, grapefruit, slight lemon, and pine up front, followed by a round malt body and then a moderate bitterness. The hops provide some earthy complexity. Slight malt, biscuit note up front that leads to a medium piney hops flavor. Moderate bitterness in the aftertaste. High carbonation creates a slight bite, but that isn't distracting. Some of the aromatic mustiness comes through in the flavor—from the hops?"

Overall: "The more I drank this beer the more I enjoyed it, but the beer seemed to struggle to find itself. Light bodied and refreshing, it doesn't overwhelm the palate, but a cloying bitterness appears after the sip—I'd like more of the piney hops flavor and a bit less of the bitterness."

AROMA:10
APPEARANCE:3
FLAVOR:17
MOUTHFEEL:3
OVERALL:8

81



La Cumbre Elevated IPA

| **ABV:** 7.2% | **IBU:** 100 | **SRM:** N/A |

What the brewer says

"It's pretty good. You should try it. Get Elevated!"

What our panel thought

Aroma: "A grove of evergreen orange trees. A touch of toffee-like malt, but the aroma always comes back to the hops—citrusy with low pine in the background and low malt sweetness."
Flavor: "Orange and pine carry over from the aroma and saturate the flavor profile. Clean hops flavors, a kiss of caramel, and a nicely balanced bitterness make a beautiful impression on the palate. A drier IPA with fruit notes of grapefruit and lime. Low malt note to round out the flavor. The carbonation and lime notes at the end create a surprising bite, but not in a bad way. Almost a slight hint of a roast character. The juiciness of this beer is alluring."

Overall: "Just a nice IPA. The hops profile is simple but admirably executed. Grapefruit and citrus lemon notes with an mild onion note that lingers in the background and added depth without overpowering the taste. I really enjoyed the juicy character of the hops in this beer. A great American IPA that I would drink any time—a solid go-to."

AROMA:12
APPEARANCE:3
FLAVOR:19
MOUTHFEEL:4
OVERALL:10

96



Left Coast Trestles

| **ABV:** 6.8% | **IBU:** 59 | **SRM:** N/A |

What the brewer says

"Trestles IPA is light bodied, clean, and pleasantly hoppy. Simcoe and Centennial hops contribute to its great citrus flavor, and... four hops keeps this beer easy drinking and moderately bitter."

What our panel thought

Aroma: "A great floral, fruity hops powerhouse. Grapefruit, grape jelly, and lemon candy. Hints of toffee to add some complexity. A touch of pine resin. Citrus hops notes up front with hints of lemon, tangerine, and pineapple."
Flavor: "A beautiful blend of sweet, Munich malts, and fruity grape-like hops flavors. The bitterness is not so strong that it overwhelms. Tons of complex hops flavors with notes of tangerine, lemon, some pine, dank, and a hint of pineapple. Hops come through almost candy-like, and finish is dry and bitter but not lingering. Bitterness is spot on."

Overall: "Grapefruit is definitely the dominating flavor, with a nice supporting complex malt flavor (without cloying sweetness). A beer that delivers on all fronts—a complex, modern take on the IPA that is executed extremely well with variety in the hops character that brings out something new in each sip. Worth seeking out."

AROMA:12
APPEARANCE:3
FLAVOR:19
MOUTHFEEL:4
OVERALL:10

97



Lone Pint Yellow Rose

| ABV: 6.8% | IBU: 62 | SRM: N/A |

What the brewer says

"A SMaSH (Single Malt and Single Hops). Chalk-white head with a very clean malt backbone. The Mosaic hops impart strong grapefruit, pineapple, and blueberry flavor and aroma."

What our panel thought

Aroma: "Tropical fruit pushes forward with mango, pineapple, guava, and the like. Some "darker" tropical fruit notes as well, like lucuma and guava. A slight yeast ester character that competes with the hops character."

Flavor: "The fruit salad continues into the flavor, though the focus is somewhat "darker" than is typical in these kinds of IPAs. Yes, there's mango and pineapple, but also think guava and even tamarind. There's a depth that is simultaneously surprising and refreshing. The orange character is much more prominent, but there's still a sweetened lemon note in the background."

Overall: "A citrus/mango beer with a very slight diacetyl issue, but a very pleasant beer with tropical fruits and just a hint of dank hops goodness. This is a nice change of pace in the bowl-of-fruit IPA aisle—a moodier IPA that is more like drinking the opening chords of Beethoven's Ninth than radio-friendly pop."

AROMA: 10
APPEARANCE: 3
FLAVOR: 18
MOUTHFEEL: 3
OVERALL: 9

87



Lord Hobo Boomsauce

| ABV: 8% | IBU: N/A | SRM: N/A |

What the brewer says

"Boomsauce is a blend of three of our New England style hoppy ales that will wrap you in a gently carbonated blanket."

What our panel thought

Aroma: "Nice fruity notes of pineapple, strawberry, peach, mango, ripe pineapple, and strawberry. Sweetness up front with a moderate hops note. Big orange and grapefruit notes."

Flavor: "Full and juicy citrus notes and some tropical fruit like mango and pineapple. Wow. All of the fruit promised by the aroma is here in the flesh. Just a beautiful melange of fruity notes that continue to impress with each and every sip. Substantial but completely appropriate malt backbone supports the hops with a delicious light caramel sweetness."

Overall: "I liked the complexity and difference in the fruity character in this beer. The sweetness was nice and worked well to balance the bitterness—a lot of sweetness with the hops to match it. This IPA delivers substantial fruit-salad aromatics that come through just as intriguingly in the flavor. A great IPA—just really well done. Smooth as hell and dangerously drinkable."

AROMA: 12
APPEARANCE: 3
FLAVOR: 20
MOUTHFEEL: 4
OVERALL: 10

97



Madtree Psychopathy IPA

| ABV: 6.9% | IBU: 70 | SRM: N/A |

What the brewer says

"The subtle malt backbone combats the bitterness and intensity of floral, grassy, and citrus hops flavors."

What our panel thought

Aroma: "Floral hops, lemon zest, and light malt sweetness. Pears and peach syrup with hints of dank green and honey. Citrus aroma up front, with lemon, grapefruit, and clementine."

Flavor: "Light body, medium citrusy hops profile, a little bit of mineral character in the finish. Pilsen malt, perhaps? Full sweet body with lots of candy-like hops and a good amount of hops bitterness to help balance the sweet body. Citrus and piney hops flavor with some malt sweetness and a slight mineral finish. Candy-like hops character with notes of tangerine."

Overall: "A bit too light for the hops profile, almost too clean—tastes like an IPL. Pilsen malt character is fairly distinctive. A good beer that's big and in your face with hops and malts alike. Very nice example—one of the more approachable, complex IPA examples and the only thing missing is that 'wow' factor of juicy hops character."

AROMA: 12
APPEARANCE: 3
FLAVOR: 18
MOUTHFEEL: 4
OVERALL: 9

90



Neshaminy Creek County Line IPA

| ABV: 6.6% | IBU: 65 | SRM: 5.6 |

What the brewer says

"Full of Warrior, Chinook, Columbus, Simcoe, and Centennial hops. Its bready malt backbone counters some of that hops bitterness, but the lingering hops bitterness shows resinous pine notes, citrusy lemon, and grapefruit."

What our panel thought

Aroma: "Earthy hops character with white-wine notes plus grapefruit and passion fruit. Very clean—no malt or yeast aroma. Bright citrus notes, with fresh zested grapefruit, orange creamsicle, and sweet tangerine."

Flavor: "Initial impression delivers on the aroma, with earthy, winey characteristics. Very faint light malt, and any esters are covered by the hops. Firm bitterness starts nice but then becomes aggressively licorice-like on the back of the tongue in the finish. Tastes like I bit into a freshly picked grapefruit—rind, pulp, juice, and all."

Overall: "The aroma is pleasant and balanced toward the fruity/juicy hops, but the puckering licorice-like bitterness is too forward. Apart from that, this is a nice IPA. The earthy, wine-like hops are interesting, aromatic, and flavorful. But a heavy-handed bitterness dominates the flavor, overwhelming the other flavors."

AROMA: 12
APPEARANCE: 3
FLAVOR: 17
MOUTHFEEL: 4
OVERALL: 9

90



Ninkasi Total Domination

| ABV: 6.7% | IBU: 65 | SRM: N/A |

What the brewer says

"Total Domination IPA has a citrusy, floral hops aroma, and big hops flavor balanced with a richness imparted by Carahell and Munich malts. This beer is a big flavorful Northwest IPA that maintains its drinkability."

What our panel thought

Aroma: "Nice fruity juicy hops aroma—blueberry, raspberry, oranges, and some evergreen. Honey sweetness with a slight spicy, low phenolic note and a touch of plum."

Flavor: "Full flavor both from the body and the hops character. Loving the blueberry! I don't know how it got into this beer, but it's a welcome twist. Caramel malt backbone elevates the hops to just where they need to be. Bright back-of-the-tongue bitterness and an incredibly creamy mouthfeel."

Overall: "I really liked this IPA—it's full of flavor, and all the flavors seemed to complement each other. A fun riff on a fruit-forward American IPA with outstanding berry character that's interesting and unusual. Appropriate malt character and bitterness points to how well blended and integrated it is. Big juicy notes with a moderate bitterness."

AROMA: 11
APPEARANCE: 3
FLAVOR: 18
MOUTHFEEL: 4
OVERALL: 9

92



NoDa Hop, Drop 'n Roll

| ABV: 7.2% | IBU: 81 | SRM: 7.7 |

What the brewer says

"2014 World Beer Cup Gold Award Winner, American-Style IPA. Crisp, mouthwatering, American citrus hops dominate. The rich golden color comes from a blend of English and American base malts accented with Vienna and wheat malt."

What our panel thought

Aroma: "A touch of sulfur with biscuit notes. Hops notes of garlic and bit of onion. Banana, spring onion, grapefruit, orange, and pine."

Flavor: "Big bitterness up front with a dry astringent note that stops just short of harsh. As it starts to warm the harshness subsides and a touch of grain sweetness comes out. Lovely creamy mouthfeel. This beer has a nice balance between the sweetness of the fruity hops notes and its bitterness. Pine, some grassy character, grapefruit, and lemon are present."

Overall: "The harshness from the bitterness lingers into the aftertaste and detracts a bit from the overall. A little sweetness would help balance the earthy notes. It's a bitter IPA that isn't ashamed of being so, but not so bitter as to turn off more delicate palates. Clean, citrusy, fruity, and herbal, this is a nice take on the style. Enjoyable."

AROMA: 11
APPEARANCE: 3
FLAVOR: 18
MOUTHFEEL: 4
OVERALL: 9

88



Oskar Blues IPA

| ABV: 6.4% | IBU: 70 | SRM: N/A |

What the brewer says

"Malt barley and red wheat create a clean malt backbone with flavor and mouthfeel to support the Enigma, Vic Secret, Ella, Topaz, and Galaxy hops with headline notes of passion fruit, raspberries, pineapple, and citrus."

What our panel thought

Aroma: "Dank and citrusy with tons of grapefruit and a candy-like aroma of lemon Starburst and Smarties. A green hoppy note joins the party along with a hint of black currant, plus some dank and resinous hops."

Flavor: "I'm immediately hit by how dry this beer is. A hint of grainy malt flavor, but this is all about the hops, which come through with lemon, green, and a bit of pine resin. Strong citrus character and good body."

Overall: "LOVE this beer. Definitely more on the bitter spectrum for a light body IPA, but still very well-balanced. Tastes like it was dry hopped yesterday—a great, super drinkable, hops-forward IPA. Its tough to pull off a IPA this dry, but they manage to do it. I really like the hops complexity in this one with a nice balance between floral, citrus, and dank hops. The candy-like hops character was excellent and added tons of nuance."

AROMA: 12
APPEARANCE: 3
FLAVOR: 18
MOUTHFEEL: 4
OVERALL: 10

97



Russian River Blind Pig

| ABV: 6.2% | IBU: N/A | SRM: N/A |

What the brewer says

"Full-bodied, very hoppy, citrus, pine, fruity notes with nice dry, bitter finish!"

What our panel thought

Aroma: "Evergreen forest, grapefruit, crayons, and Play-Doh. Slightly briny? Very nice juicy hops character with orange, grapefruit, and slight lemon."

Flavor: "Medium bitterness with a rather light body. Slight new-shoe-like taste with a growing bitterness that extended well into the aftertaste and continued to grow. As it warms the rubber goes away, and we are left with a dank hops note with a touch of garlic. This beer has a nice body with a smooth character. The pine is showcased in the hops, and the grapefruit citrus notes help round out the hops profile. The beer is nicely balanced between the hops bitterness and flavor."

Overall: "Dank hops notes with slight pine. Moderate bitterness that didn't come out until it warmed slightly. An IPA that leans toward the resinous and dank side of the spectrum. Some citrus brightness keeps it from being too sticky. Perhaps better suited to contemplative stormy evenings than daytime revelry. This beer came together very well with pleasant hops and not too much bitterness."

AROMA: 11
APPEARANCE: 3
FLAVOR: 18
MOUTHFEEL: 4
OVERALL: 9

89



Schlafly Tasmanian IPA

| ABV: 7.2% | IBU: 65 | SRM: N/A |

What the brewer says

"The Tasmanian hops, Galaxy, is a strong, aromatic variety that is different from traditional strains of the Pacific Northwest. Our brewers developed a recipe that showcases the hops' unique flavors of citrus and pineapple."

What our panel thought

Aroma: "Nice tropical fruit character with mango and passion fruit. Some lemon grassiness adds some nice contrast to the juiciness. Juicy mango, banana, peach, and pineapple. Very subtle light malt presence—perhaps a little wheat?"

Flavor: "A wonderfully balanced beer that has a huge amount of fruity hops flavor up front that evolve to show more pine and dank character. Strong over-ripe banana, pineapple, and mango. Suggestions of earthiness are fleeting. Nice silky carbonation on the tongue. As in the aroma, the flavor suggests some wheat and the light fluffiness that implies."

Overall: "A delicious and balanced beer that highlights the hops selection nicely. A refreshing, not-too-crazy, well-executed IPA. It's smooth, it's spritzzy, and it just tastes good. This is a great choice any time of year."

AROMA: 12
APPEARANCE: 3
FLAVOR: 19
MOUTHFEEL: 5
OVERALL: 10

97



Toppling Goliath Golden Nugget

| ABV: 6% | IBU: 56 | SRM: N/A |

What the brewer says

"Crafted from Golden Promise malt and Nugget hops. Tropical fruit flavors entice your taste buds before immediately captivating you with a bold, hops-forward taste and a pleasant bitterness in the finish."

What our panel thought

Aroma: "Light resins and piney notes with a hint of earthiness, mango, and a subtle light malt character. Citrus and white-wine grapes right off the bat. A little bit of fruity alcohol kick with peaches and plums."

Flavor: "Moderate malt sweetness—light biscuity notes. Hint of cotton candy. Hops forward—a little light on body for the amount of bittering hops used, but still quite easy to drink. Yeast is mostly clean with just a hint of fruity pear esters. A strong bitterness that throws a 1-2 punch to the straw-flavored malt presence. Lots of minerality, somewhat reminiscent of a German Pilsner."

Overall: "Another very light IPA, but quite refreshing. Shows complexity with the hops, but the base beer struggles slightly to support the hops character. Could finish a bit drier. Very enjoyable, but would be more so with a cleaner malt profile and higher attenuation."

AROMA: 12
APPEARANCE: 3
FLAVOR: 16
MOUTHFEEL: 4
OVERALL: 9

89



Tree House Green

| ABV: 7.5% | IBU: N/A | SRM: N/A |

What the brewer says

"Our cross-continental IPA. Made with Australian and American hops, this citrus-heavy IPA opens up in the glass with notes of pineapple, tangerine, and orange rind. It's sharply bitter and nearly 8 percent ABV."

What our panel thought

Aroma: "Sweet and juicy tropical fruit, pineapple, lemon, mango, peach, and banana. The nose is delicate and subtle but mouthwatering—an absolutely wonderful aroma."

Flavor: "More fruity notes of pineapple, mango, and assorted tropical fruit. There's a nice smoothness to this beer bordering on fluffy. Fresh-cut pineapple stewed in pineapple juice and topped with candied pineapple. Malt backbone is chewy and substantial, while the bitterness is dangerously smooth. Melon and cantaloupe right off the bat! Low spicy notes in the middle of the sip. Very unique."

Overall: "This beer is great—so full of juicy fruit flavors. Fluffy and light without sacrificing body. Great showcase of the hops. The low bitterness is just enough to make it an IPA. A juicy, fruity, hazy, chewy IPA that's an excellent example of what new-school IPA can be."

AROMA: 12
APPEARANCE: 3
FLAVOR: 20
MOUTHFEEL: 5
OVERALL: 10

100



Tree House Julius

| ABV: 6.8% | IBU: N/A | SRM: N/A |

What the brewer says

"Bursting with pungent American hops, Julius is bright and juicy, filled with flavors and aromas of mango, peach, passion fruit, and a mélange of citrus juice. It has a soft, pillowy mouthfeel and rounded bitterness."

What our panel thought

Aroma: "Peaches, oranges, mango, passion fruit, tangerine, grapefruit, and even a touch of pine—it's a punch in the nose with a fruit cart. I think I consumed a serving of fruit just through the aroma."

Flavor: "Peach and pine carry through from the aroma and are augmented by some dank-ish notes. Some moderate malt sweetness is there, but the emphasis remains ever on the hops goodness. Pleasant bitterness backs up the ensemble and delivers its own tangerine-like notes as it washes down the throat."

Overall: "A big citrus/tropical fruit bomb with enough malt sweetness to temper the bitterness. A beautiful IPA, both visually and on the palate. I can almost picture someone cramming hops into the bottle or can. A wonderful use of hops that doesn't try to get too fancy with anything else and just delivers an amazing hops-forward beer."

AROMA: 12
APPEARANCE: 3
FLAVOR: 20
MOUTHFEEL: 5
OVERALL: 10

99



Tröegs Perpetual IPA

| ABV: 7.5% | IBU: 85 | SRM: N/A |

What the brewer says

"Artisanal meets mechanical in a state of IPA we call Perpetual. Cycling through our HopBack vessel and dry-hopping method, this imperial pale ale emerges rife with sticky citrus rind, pine balm, and tropical fruit."

What our panel thought

Aroma: "Earthy, pine needles, lavender. Moderate hops notes with very little malt sweetness. Nice fruity character and a little onion. Slight malt sweetness."

Flavor: "White-wine grapes, lemons, spruce tips, and grapefruit. Moderately strong malt background can't keep up, though it tries. Sweetness up front with a light hops flavor and a medium hops bitterness. Slight herbal notes, similar to chai tea, but subtle. Aftertaste is bitter and moderately lasting. Not as smooth as other examples."

Overall: "A solid American IPA that is right down the middle for the style. You can't go wrong with this one, though you may have trouble picking it out of a very talented crowd. This IPA has subtle herbal notes that may have been lost due to its placement in the review lineup. I enjoyed the fruit character in this beer and how it blended from the start to the finish."

AROMA: 11
APPEARANCE: 3
FLAVOR: 18
MOUTHFEEL: 4
OVERALL: 10

91



Two Brothers Wobble IPA

| ABV: 6.3% | IBU: 69 | SRM: N/A |

What the brewer says

"Once in a while we feel a need to 'wobble' on the edge of really hoppy. Wobble IPA is golden in color with subtle malt character, big complex citrus and piney hops notes throughout."

What our panel thought

Aroma: "A mix of fruity and herbal/earthy hops notes. Initially, some spearmint character stands out, but slowly fades. Slight biscuit malt notes smooth out the aromas. Orange citrus, powerfully fruity, mild pine."

Flavor: "Clean malt and yeast flavors provide a nice base for some tasty hops flavors with restrained bitterness. There are the expected strong citrus notes, but light pine and dank flavors add a nice depth. Nice citrus up front, followed by forest floor and musty (but pleasant) notes. Subtle caramel rounds out the middle and gives way to a long, pleasing bitter finish."

Overall: "This beer expertly balances some very interesting hops flavors to create a fun tasting experience. An IPA that leans on fruity hops character and performs admirably. Bitterness is nice, though just a touch assertive compared to the juicy fruitiness."

AROMA: 11
APPEARANCE: 3
FLAVOR: 19
MOUTHFEEL: 4
OVERALL: 9

93



Wicked Weed Pernicious

| ABV: 7.3% | IBU: N/A | SRM: N/A |

What the brewer says

"Pernicious, our flagship IPA, took a silver medal at the 2015 Great American Beer Festival. This massively dry-hopped ale has minimum malt complexity and a combination of juicy, tropical fruit-forward hops with heavy resinous American hops."

What our panel thought

Aroma: "Lemon, pine, whiffs of citrus, white wine, and fresh-cut grass. Virtually no malt in the aroma. Lemon grass and a mild grape-must character stand out."

Flavor: "Hops flavors of evergreen trees, chardonnay, and lemongrass set the stage for a surprisingly smooth beer. Bitterness is smooth, and despite the appearance of the beer, the malt character is more than just a blank canvas. Finish is dry and pleasant. The complexity in hops flavors that was promised from the aroma is delivered quite well."

Overall: "A delightful IPA. It's light on the tongue and even spry in its delivery of interesting modern hops varieties. Malt backbone is surprisingly apparent despite the very light appearance. Bitterness is pleasing and complementary. A great IPA that could even pair well with light seafood like sushi. Citrusy, spritzly fun."

AROMA: 12
APPEARANCE: 3
FLAVOR: 20
MOUTHFEEL: 4
OVERALL: 10

98



Wormtown Be Hoppy

| ABV: 6.9% | IBU: 69 | SRM: N/A |

What the brewer says

"Reddish-gold hazy unfiltered brew. Pungent aroma of citrus, floral spice, and grapefruit. Decidedly bitter palate with a medium light body. Flavors of hoppy grapefruit give way to a dry finish."

What our panel thought

Aroma: "Lemon zest, grapefruit, and a slight whiff of smoke (phenols?). Slight spicy note with low garlic notes. As it starts to warm a slight sweetness presents."

Flavor: "Lemongrass, grapefruit, and a unique cured-meat note are nicely supported by a light, spritzly malt body. Lively and bright on the tongue with a bitter, slightly sweet finish. A slight cabbage-like note up front but in a fresh street taco sort of way. Medium bitterness, a slight juicy note, and some earthy flavors evolve as it warms."

Overall: "The lemony aroma is quite nice—it's a lively beer that improves as it warms up and exhibits a pleasant bitterness. Enjoyable fruit character and appropriate bitterness but not overly complex. Could pair well with street tacos—the corn tortillas and the cabbage would play very nicely with the dank, earthy and somewhat juicy hops flavors."

AROMA: 11
APPEARANCE: 3
FLAVOR: 18
MOUTHFEEL: 4
OVERALL: 9

90



3 Floyds Arctic Panzer Wolf

ABV: 9% | IBU: 100 | SRM: N/A

What the brewer says

"A massive IPA that will leave your palate its hapless victim. Scorched earth is our brewery policy."

What our panel thought

Aroma: "Bubblegum ester, along with some cherry. Clean pilsner malt sweetness. Hops flavors pick up pineapple, orange, mango, and tropical fruit. An awesome nose."
Flavor: "Initially seems a bit mild, but each sip freshly revisits that citrus hops flavor, and the malt persists without cloying or fading. Even better, the perception of bitterness builds a little to give the beer some backbone. So much juicy flavor—pineapple, mango, tropical fruit, lemon, citrus—its all over the place. Thick and chewy toasted malt sweetness just strong enough to support the hops. Bitterness is well blended and carb is spot on."
Overall: "Great beer that continues to get better as you drink it. Layers of fruit flavors that offer endless depths. The sweetness is dialed, the bitterness bold, and everything ultimately serves the creative hops flavors. The bitterness is fantastic. A great showcase of contemporary hops."

AROMA: 12
 APPEARANCE: 3
 FLAVOR: 20
 MOUTHFEEL: 4
 OVERALL: 10

98



3 Floyds Dreadnaught

ABV: 9.5% | IBU: 100 | SRM: N/A

What the brewer says

"An Imperial India Pale Ale with an intense citrus hops aroma, a huge malt body, and a crisp finish."

What our panel thought

Aroma: "Lemon, grapefruit, and light biscuity malt sweetness. Light caramel and light ethanol. Pineapple, tangerine, and some lavender-like soapy notes."
Flavor: "Super citrusy and a nice melon, mango-like fruit character with a chewy malt character that isn't too heavy. Crisp and clean finish with a hint of alcohol heat. Smooth and well-integrated flavors. The bitterness is present but not too bitter, and the warmth in the finish adds to the experience. Light tangerine, light pine tar, earthy, with a light ethanol warmth. Nice carbonation and body. Fun mouthfeel. I like the bitterness."
Overall: "Definitely on the higher alcohol side, but hides it very well. Very clean hops and malt character and a crisp finish—enjoyable with a nice blend of fruit that both stands out and blends together well. A fun beer with enough malt sweetness that it could qualify as an American Barleywine. Orange zest, mandarin orange, honey, and lavender conspire to deliver a double IPA that is pleasant, but which is not for everyone."

AROMA: 12
 APPEARANCE: 3
 FLAVOR: 18
 MOUTHFEEL: 4
 OVERALL: 10

94



Against the Grain Rico Sauvignon

ABV: 7.6% | IBU: 68 | SRM: N/A

What the brewer says

"An IPA featuring organic Nelson Sauvignon hops, which have a strong fruity flavor and aroma that resembles white wine or fresh crushed grapes or gooseberries. Some reviewers notice passion fruit, tangerines, and grapefruit."

What our panel thought

Aroma: "Grapefruit and piney hops aromas with a hint of lemon. Moderate malt sweetness, hints of biscuit and caramel. Nice hops aroma on the front. Fresh."
Flavor: "Bright and juicy hops notes are high on flavor and moderate on bitterness. Finish is clean with only a hint of astringency. Malt is lightly sweet and balanced perfectly with the moderate hops bitterness. Slight astringency in the bitterness distracts from the otherwise pleasant finish. The juicy character of the beer carries through to the finish and sits beside the bitter aspects from the hops in this beer."
Overall: "Good, balanced, easy-drinking IIPA. Mostly citrus with a touch of floral, and a touch of earthy resin at the end. The finish is what really makes it—very clean and citrusy with notes of orange peel and lemon. It sacrifices bombast for solid drinkability making for a fine beer."

AROMA: 12
 APPEARANCE: 3
 FLAVOR: 19
 MOUTHFEEL: 4
 OVERALL: 10

95



Avery Raja

ABV: 8% | IBU: N/A | SRM: N/A

What the brewer says

N/A

What our panel thought

Aroma: "Pine bomb with a grapefruit punch on the end and a curious mild sour funk that leans a touch medicinal. Weak, lemony hops aroma with some pine, lemon, and citrus notes. Sweetness with lots of fruit!"
Flavor: "Rich and well blended. Dialed bitterness throughout that's good for style. Lemon-heads candy, strong lemon/orange flavor. A fair chunk of that is the hops, but there's something else going on. Moderate hops bitterness that melds with the tartness. There's a splash of brighter esters and malt sweetness, but the funk from the nose is here, too. Sweet and juicy with lemon and orange and citrus notes. The hops are more favorable, less bitter, and balance well with the malt. Finishes with a slight bitterness and a nice sweetness."
Overall: "Solid IIPA that tastes very fresh. The high carb gives it a bite that I don't care for, but it is otherwise very good. The pine and grapefruit play well together. Very good. This beer blended well together, and the finish had me wanting another sip."

AROMA: 11
 APPEARANCE: 3
 FLAVOR: 18
 MOUTHFEEL: 4
 OVERALL: 10

90



Boulevard The Calling

| ABV: 8.5% | IBU: 75 | SRM: N/A |

What the brewer says

"The Calling is our most heavily hopped beer ever, bursting forth with unmistakable tropical fruit and pine hops aromas and flavor supported with a slightly sweet malt character, tapering to a crisp, dry finish."

What our panel thought

Aroma: "Strong orange and lemon aroma, slight zest character. A little mineral-like, mild hops are herbal/spicy. Tropical fruit sweetness hits at the front with mango, pineapple, some lemon, some orange. Juicy."
Flavor: "Malt sweetness tastes like a very blonde caramel. Hops character of orange and lemon flesh and zest blend pretty well. Bitterness is nicely blended throughout and lingers just a touch. Hops flavor is all tropical fruit—mango and coconut. Some bitterness is hiding in there, but the overall impression is sweet, not bitter."

Overall: "Interesting blend of very light-colored caramel malt and bright citrus hops. A little too sweet overall, but not cloying at all. I like this beer a lot, but I'm surprised to have it as a double IPA. The sweetness and mild bitterness are unexpected, even if it's a pleasant drink."

AROMA: 11
APPEARANCE: 3
FLAVOR: 17
MOUTHFEEL: 4
OVERALL: 10

90



Captain Lawrence Palate Shifter

| ABV: 9% | IBU: N/A | SRM: N/A |

What the brewer says

"When your everyday IPA no longer satisfies your craving for hoppy nectar, the only cure is more hops! Palate Shifter is brewed with American hops and dry hopped for an extra aromatic kick!"

What our panel thought

Aroma: "Big pineapple, light strawberry, light pear, almost bergamot, melon sweetness, lemonade, fragrant floral, and hint of malt. Aroma is overall more faint than the flavor."
Flavor: "Little bit of floral hops character—honeyuckle—along with some lemon and grassiness. Clean, straightforward malt character. Super crisp finish with no lingering astringency. Bergamot, Darjeeling, and lemongrass. Supportive light malt body is spritzy and fun with a great mouthfeel. Some light alcoholic warmth."

Overall: "Very smooth IIPA—even the fruit notes are smooth and rounded, almost delicate. The only sharp edge at all is the bitterness at the end. Clean and delicious with a very nice finish—a sweet but not too sweet IPA. This would be great with spicy Asian dishes. Lemongrass and Earl Grey—tea character suggest a great Indian pairing."

AROMA: 12
APPEARANCE: 3
FLAVOR: 19
MOUTHFEEL: 5
OVERALL: 10

97



Coronado Stingray IPA

| ABV: 7.9% | IBU: 48 | SRM: N/A |

What the brewer says

"This easy-drinking IPA will transport you to a tropical paradise. Citra, Mosaic, Simcoe, and Southern Cross hops provide flavors and aromas of tropical fruits and sun-kissed citrus with soft accents of nectarine and peach."

What our panel thought

Aroma: "Earthy, piney, grassy hops notes. Hint of biscuit malt. Orange peel, lemon-drop candy, hints of scallions, melon, very subtle grainy malt notes. Overall suggestion is of brightness."
Flavor: "Initial punch of fruity hops flavor that diminishes quickly. Tropical fruit on the tongue more than in the nose. Substantial evergreen character is a nice surprise. Good creamy mouthfeel adds to the overall palate character. Bitter finish is grapefruit and smooth. Malt plays a supporting role but doesn't get in the way. The green-onion note sits on the tongue through the finish. A lot of spruce and pine notes."

Overall: "Moderately malty IIPA, very strong on the pine/resin side with a touch of citrus on the nose. A deceptively drinkable double IPA! Great blend of classic American IPA character along with some New-World flavors that make for a delightful tasting experience."

AROMA: 12
APPEARANCE: 3
FLAVOR: 17
MOUTHFEEL: 4
OVERALL: 9

90



Elysian Space Dust IPA

| ABV: 8.2% | IBU: 73 | SRM: N/A |

What the brewer says

"The hopping is pure starglow energy, with Chinook to bitter and late and dry additions of Citra and Amarillo."

What our panel thought

Aroma: "Moderately sweet with a slight phenolic. Peach, mango. Not intensely hoppy. Some malt sweetness. Some orange, pine, and lemon."
Flavor: "Sweet up front and strongly bitter on the finish. The phenolic shows up on the palate as well. Hops evoke peach, orange, and mango. Slight slickness on the tongue indicating possible diacyl. The bitterness fights against the sweetness in this flavor a bit. Finishes with some warmth. Very mild hops flavor compared to most the others. Some grassiness and a bit of floral. Lots of pithy bitterness and little of that malt complexity from the nose."

Overall: "Slightly disjointed with a few missteps that detract from overall impression. Hops character is pleasant, but is overshadowed by the phenolic. The beer has some good flavors at its core—the malt character has some nice sweetness, and the hops have some good juice and bitterness. But the sum of the whole here is not greater than the parts."

AROMA: 10
APPEARANCE: 3
FLAVOR: 17
MOUTHFEEL: 4
OVERALL: 9

84



Foley Brothers Fair Maiden

ABV: 8.2% | IBU: N/A | SRM: N/A |

What the brewer says
N/A

What our panel thought

Aroma: “Orange and lemon with a touch of pineapple and pine as it warmed up. Cut grass, lemon, grapefruit, and pine resin. Slightly subdued nose.”

Flavor: “Rich malt backbone, possibly some adjunct use with proteins to thicken things up? Hops are strongly citrus, mostly orange and lemon with some pineapple beneath. Well blended throughout the palate and no rough edges. Nice citrusy hops—tangerine and grapefruit—buoyed by a breath of malt. Good bitterness that lasts into the finish, but the citrus is the main impression. Nice malt sweetness to back the hops. Lots of juicy fruit character—pineapple, orange, lemon—it all comes together and blends but stands out nicely. The finish is equally strong. Great hops flavor that carries through this beer.”

Overall: “A great example of the evolution of the style despite the delicate nose. Smells and tastes very fresh. The malt here is well played and supports the flavor even as it balances the bitterness. Great beer with delicious depths of bright flavors.”

AROMA: 12
APPEARANCE: 3
FLAVOR: 19
MOUTHFEEL: 5
OVERALL: 10

99



Golden Road Wolf Among Weeds

ABV: 8% | IBU: 80 | SRM: N/A |

What the brewer says

“This is our celebration of California’s enthusiasm for hops-forward IPAs. At 8 percent ABV, Wolf will sneak up on you from behind the robust citrus and dank earthy hops notes mirrored in its aroma and flavor profile.”

What our panel thought

Aroma: “Very bright on the nose overall. A bit of a campsite character: Pine sap, fresh pine, very faint smoke. There’s also a bit of lime rind, too. Grapefruit, orange, citrus, fruit character—lots of hops dominate the nose.”

Flavor: “Big pine and citrus notes couple with a superclean malt profile. Intense bitterness lingers long after the beer is swallowed. Nice and dry on the finish to accentuate the bitterness. Pine and citrus complexity—lemon and tangerine. Wonderful flavor—strong but not overwhelming and expands on the nose nicely. Good bitter foundation that anchors the finish. Very mild flash of alcohol warmth at the swallow, but smooth. Fairly dry.”

Overall: “This beer drinks easier than it should. The crisp malt bill allows for none of the hops character to hide. I like the more-ish quality. Quite refreshing. The more I drink it, the more I enjoyed it.”

AROMA: 12
APPEARANCE: 3
FLAVOR: 19
MOUTHFEEL: 4
OVERALL: 10

96



Great Divide Hercules Double IPA

ABV: 10% | IBU: N/A | SRM: N/A |

What the brewer says

“Hercules IPA is not for the faint of heart. It delivers a huge amount of hops from start to finish. Its hefty backbone of nutty, malty sweetness balances its aggressive hops profile.”

What our panel thought

Aroma: “Floral with jasmine notes and a hint of lemon and lavender. Faint grassy notes and some grainy sweetness. Cloves, cinnamon, citrus peel, and honey—holiday festive. A toffee/biscuit-like malt sweetness.”

Flavor: “Initial toffee sweetness is balanced by some nice bitterness in the finish. Resinous, caramelly, evergreen, and bitter. Malt is enjoyable, though the bitterness comes off a bit harsh. As it warms, the bitterness becomes even harsher.”

Overall: “More malt-focused for a double IPA. Nice complexity and some complementary floral, earthy hops flavors. An IPA for the holidays! This is like a cross between an IPA and an English winter warmer. More wintry than summery with a nice complexity driven by an earthy spiciness that leaves a bold impression.”

AROMA: 11
APPEARANCE: 3
FLAVOR: 17
MOUTHFEEL: 4
OVERALL: 9

89



Grimm Artisanal Ales Tesseract

ABV: 8% | IBU: N/A | SRM: N/A |

What the brewer says

“Soft, fresh, and tropical.”

What our panel thought

Aroma: “Equal parts mild, delicate, bright, and lively with juicy pineapple, mango, passion fruit, and banana. Fruit loops, cotton candy, and Starburst hops aromas. Creative and alluring.”

Flavor: “Tons of delicious pineapple juice flavor! A silky malt body puts the hops flavor up on a pedestal but remains unobtrusive and simply supportive. This is a powerfully fruity and delightfully delicious beer, regardless of category—the smoothness and fluffiness of this beer is excellent with lemon, pineapple, and mango fruit sweetness. A soft bitterness backs up the copious fruit flavors.”

Overall: “Luscious and juicy, this would be great with brunch. Let them have their mimosas. I’ll have this one, please. It has a great overall flow from aroma to aftertaste with carefully considered malt and bitterness that lets the diverse hops flavors shine. Light, soft, and hazy—this might not be the beer that most think of when they think ‘IPA,’ but it’s a gorgeous example of creativity within the style and where it can go.”

AROMA: 12
APPEARANCE: 3
FLAVOR: 19
MOUTHFEEL: 4
OVERALL: 10

96



Hardywood Quadrahop

| ABV: 8.5% | IBU: 85 | SRM: N/A |

What the brewer says

"Nelson Sauvin hops deliver gooseberry and white wine. Citra brings passion fruit, lychee, melon, and citrus notes. Amarillo adds fresh lemon, orange, grapefruit, and tropical floral. Mosaic adds berry and mango and a backbone of earthy pine."

What our panel thought

Aroma: "Moderate lemon and orange with some grapefruit underneath. Herbal/spicy—marjoram and basil—along with citrus notes of lemon and orange."
Flavor: "Strong orange and lemon hops flavor over a moderate toasted malty sweet backbone. Bitterness is moderate throughout, and the beer finishes pretty dry. Nice Juicy character with orange and grapefruit juice. Very clean citrus hops flavor—tangerine, orange, and lemon, with spicy undertones. I still get the basil here, too, like Thai basil. Pleasant hops bitterness with a solid malt back. The finish is clean and not harsh."
Overall: "Well put together with a creative southeast Asian twist. The fruity juicy character of this beer delivers, with a supportive body, good balance, and interesting character. A beer I could see pairing well with foods beyond the typical IPA suggestions."

AROMA: 11
APPEARANCE: 3
FLAVOR: 19
MOUTHFEEL: 4
OVERALL: 10

95



Hop Concept Tropical and Juicy

| ABV: 8.5% | IBU: N/A | SRM: N/A |

What the brewer says

"Aromas of floral citrus and mango dominate. The flavor leads with a burst of bright papaya, pineapple, and tangerine and finishes with hints of spice from the hops and a clean, sweet malt undertone."

What our panel thought

Aroma: "Well-blended citrus and tropical fruit, orange/lemon/pineapple. Pine character is strong in the nose. Well-balanced between light toasty malt and piney hops. Light esters. Some grassiness."
Flavor: "Grapefruit juice notes and some orange. Sweet but not too sweet. Some bitterness and grapefruit through the finish with slight warmth. Strong toasted character with orange/lemon/pineapple esters. Intensely bitter throughout with a long finish. Rich pine with woody undertones and some lemon and orange. The bitterness is well executed with no harsh edges. Nice body, too."
Overall: "The blend of sweetness to hops flavor and bitterness works well. An intensely bitter DIPA with strong character, a nice nose and flavor, and well-balanced."

AROMA: 11
APPEARANCE: 3
FLAVOR: 18
MOUTHFEEL: 4
OVERALL: 10

94



Lawson's Sip of Sunshine

| ABV: 8% | IBU: N/A | SRM: N/A |

What the brewer says

"This lupulin-laden IPA is packed with juicy tropical fruit character, bright floral aromas, and delectable layers of hops flavor. Pour mindfully, inhale deeply, and enjoy a tropical vacation in a glass."

What our panel thought

Aroma: "Fruity, orangey, and dank with a skunky hops aroma (in a good way). Hops are showcased—big resin, slight grassiness, green onion, a bit of pine, and just a hint of biscuit malt."
Flavor: "Big earthy bitterness, lightly chalky, resinous but not sharp. Surprisingly low bitterness for the obviously large amount of hops in the beer. Lovely caramel malt sweetness helps round out the finish and offset a tiny bit of astringency. Moderate creamy aftertaste. Lovely! Big juicy oranges and passion fruit. Residual sweetness is welcome and lends balance to the pleasantly bitter finish."
Overall: "Big dank, earthy hops bomb with a touch of malt sweetness—this beer smells like it was grown, not brewed. The malt complexity helps add an extra dimension to this fun and fruity example of IPA 2.0, be it session, single, double, or otherwise. A wonderfully drinkable beer."

AROMA: 12
APPEARANCE: 3
FLAVOR: 19
MOUTHFEEL: 4
OVERALL: 10

96



Maine Beer Company Dinner

| ABV: 8.2% | IBU: N/A | SRM: N/A |

What the brewer says

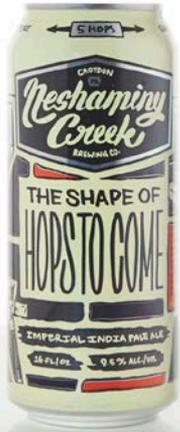
"It's dry, refreshing, and a hoppy happening. Our intention was to really amp up the hops flavor and aroma. So we dry hopped twice, with more than 6 pounds of hops per barrel."

What our panel thought

Aroma: "Intense white grapefruit and lemon with a touch of pine to accentuate. Assertive with freshly peeled orange, hints of lemon zest, and tropical fruit. Net effect is exotic and interesting."
Flavor: "Intensely hoppy with a nice chewy malt backbone to support. Same white grapefruit and lemon predominate with some tropical-fruit notes peeking through. Well-balanced throughout. It's a fruity citrus party—lemon dominates with orange, tangerine, and grapefruit facets, along with some pineapple and mango. After a moment, it shifts to grapefruit as the bitterness builds."
Overall: "The blend of hops with the malt to balance make this a really solid DIPA. A really wonderful beer that showcases the hops. It's tight, refined, clean, crisp, dry, and juicy with absolutely nothing taking the spotlight away from the beautiful blend of hops."

AROMA: 12
APPEARANCE: 3
FLAVOR: 20
MOUTHFEEL: 5
OVERALL: 10

100



Neshaminy Creek Shape of Hops to Come

ABV: 8.5% | **IBU:** 98 | **SRM:** 6.4 |

What the brewer says

"Two-row American barley packed with as much Apollo, Newport, Simcoe, Topaz, and Citra hops we could get our hands on for a ton of bitterness, along with juicy, dank resinous pine-like, and citrus-forward hops character."

What our panel thought

Aroma: "Medium intensity orange and lemon with a slight sweetness from the malt. Nice fruity hops sweetness. Orange, grapefruit, pineapple, tropical fruit, with a quick hit of Christmas tree."

Flavor: "Medium malt sweetness accentuated by citrus hops notes. Malt tastes like a blend of toasted and caramel varieties. Intensely bitter on the finish—the bitterness from the hops hits in the front and carries through this beer well into the linger. Fresh and vibrant mango and pineapple notes dance with pine tree and green herbs. Light malt sweetness in the finish, too."

Overall: "It's a touch sweet up front and a touch bitter on the finish making for a pretty bold and bitter beer that should probably be enjoyed at a warmer serving temp to bring out the fruity hop notes. It was quite bitter in the start, but the more I drank it more the rest of the beer came out for me. In the end, I enjoyed it."

AROMA: 12
APPEARANCE: 3
FLAVOR: 19
MOUTHFEEL: 4
OVERALL: 10

96



Revolution Unsessionable

ABV: 10% | **IBU:** 100 | **SRM:** N/A |

What the brewer says

"Six hops varieties, including tons of Galaxy, infuse this IPA with flavors and aromas of pine, passion fruit, and citrus rind. It has a surprisingly dry and crisp finish."

What our panel thought

Aroma: "Earthy and floral—light banana, pear, and pineapple. Juicy Starburst-hops aroma with a hint of cotton candy. Orange, pineapple, mango, and banana. Increasing evergreen as it warms. Really nice fruity hops sweetness with some pineapple, mango, and citrus character."

Flavor: "This obviously higher-ABV take on a double IPA hides the light alcohol warmth well under fruit-salad hops notes, soft malt, tangerine, pineapple, and mouth-filling carbonation. Tropical fruit in a dense pine forest with lingering bitterness."

Overall: "The flavor with malt sweetness and fruity goodness was quite wonderful. The aroma was a little muted (palate fatigue?). Some might say this is a little too sweet, but I think it balances well. Another double IPA that's on the sweeter, fruitier side. A bit more muted from a hops bitterness perspective. A thick DIPa that is better sipped than quaffed."

AROMA: 12
APPEARANCE: 3
FLAVOR: 19
MOUTHFEEL: 4
OVERALL: 10

95



Sam Adams Rebel Rouser

ABV: 8.4% | **IBU:** 85 | **SRM:** N/A |

What the brewer says

"Bold, citrusy, and piney, this isn't just a bigger version of Rebel IPA. Instead we explored a different balance of hops character, including Bravo and Galaxy hops, and upped the ante on their flavor and expression."

What our panel thought

Aroma: "Nice orange notes. Slightly minty with hints of phenols that lean slightly medicinal. Earthy hops, moderate esters, and a light malt."

Flavor: "Good blend of malt sweetness with some nice grapefruit, orange, and pine notes. The sweetness underpins both the hops and the malt and helps balance the bitterness. Mint from the nose is subdued a bit on the palate, but it's still a bit of a train wreck of flavors—raw malt sweetness and caramel, cardboard oxidation, strong fruity esters, and an out-of-place light tartness."

Overall: "A good IPA with a strong PNW hops profile—the dance between malt and hops worked well in this beer for me. Doesn't dry out like most DIPAs, and the bitterness is a touch overdone. A bit muddled in the flavor presentation—if I had bought this, I'd be a bit disappointed."

AROMA: 10
APPEARANCE: 3
FLAVOR: 16
MOUTHFEEL: 4
OVERALL: 9

82



Stone Ruination Double IPA 2.0

ABV: 8.5% | **IBU:** 100+ | **SRM:** N/A |

What the brewer says

"For the second incarnation of our India pale ale, we employed dry hopping and hop bursting to squeeze every last drop of piney, citrusy, tropical essence from the hops..."

What our panel thought

Aroma: "Lemon and red grapefruit—hops aromas, grain sweetness, and nice hints of pineapple as it warms. Bitter orange, candied citrus, green onion, garlic, and honey add to the juicy character."

Flavor: "Aggressive hops bitterness is piney, resinous. Biscuity malt helps round out the finish. Hint of higher alcohols in the finish. Bitter orange, more scallions, a touch of earthiness, and a lovely caramel note. Complex flavor and great mouthfeel. Finishes with a lingering bitterness."

Overall: "Big earthy hops bomb with very light oxidation. This beer is high enough in IBUs that you really need to let it warm thoroughly before drinking. As it warms, some nice fruity, citrusy flavors help balance out the aggressive hops bitterness. The hops profile comes across somewhat murky, which isn't to say it's bad—it leaves one guessing, which can be quite rewarding. A nice double IPA overall."

AROMA: 11
APPEARANCE: 3
FLAVOR: 18
MOUTHFEEL: 4
OVERALL: 10

92



Tree House Haze Double IPA

| ABV: 8.2% | IBU: N/A | SRM: N/A |

What the brewer says

"A ton of orange on the nose, with complementary notes of peach and passion fruit. The flavor is similar with a blast of citrus and orange followed by spicy grapefruit and earthy dankness. A lingering but pleasant finish awaits."

What our panel thought

Aroma: "Lots of juicy notes on this nose. Dank and resinous hops aroma. Mild malt and moderate esters. Huge orange aromas with lemon citrus complexities. Slight malt sweetness underneath."

Flavor: "Beautifully integrated flavors that range from lemon juicy notes to pineapple and mango. Very big hops flavor, expanding on that resinous spiciness in the nose to add some grapefruit notes. Rich but soft bitterness that lasts for days, like a dark-roast coffee. Big and chewy. Massive orange notes with some underlying complexity tasting of grapefruit and lemon. Finishes slightly bitter, begging another sip."

Overall: "Turbid and chewy body showcases the complex hops profile with excellent execution. The hops juiciness is paramount and carries through the beer. This beer tastes like breakfast (beer-mosa anyone?). Perfect for a weekend brunch."

AROMA: 12
APPEARANCE: 3
FLAVOR: 20
MOUTHFEEL: 4
OVERALL: 10

98



Trillium Artaic

| ABV: 8.5% | IBU: N/A | SRM: N/A |

What the brewer says

"Juicy, candied peach and nectarine up front backed up with a nuanced white wine on the nose that continues straight through in the flavor profile. Pillowy soft mouthfeel, with a restrained bitterness on the finish."

What our panel thought

Aroma: "A blend of juicy fruit character and grassy earthiness from the hops. Deep fruit character pulls on tropical-fruit notes and citrus character. Grapefruit dominates, with some blood orange and black peppercorn notes. Spicy!"

Flavor: "Very juicy notes of mango and melon, some pineapple, maybe a little strawberry-like flavor. Some juice-like sweetness complements the sweetness of the malt. Maybe a hint of saltiness? Deep herbal components suggest oregano and cumin."

Overall: "A little bit of every hops character from 'the list' but predominately dank and fruity. This is fairly sweet DIPA that goes light on the bitterness, pulls out more fruit flavor from the hops with the slight sweetness, and really showcases gorgeous hops flavors. Would pair well with a dessert—a great palate cleanser. Very unique take on the style that's delicious and intriguing."

AROMA: 12
APPEARANCE: 3
FLAVOR: 20
MOUTHFEEL: 4
OVERALL: 10

99



Wicked Weed Freak of Nature

| ABV: 8.6% | IBU: N/A | SRM: N/A |

What the brewer says

"Our intent was to create a hops delivery vehicle. We dry hop with almost 4 pounds of hops per barrel. The resulting blend of dank and citrus-forward hops makes for a palate changing experience."

What our panel thought

Aroma: "Earthy, citrusy, and piney hops notes. Hint of mango and melon sweetness. Light perfume-y—has a fragrance to it. Citrus-fruit notes of lemon and orange, with a touch of grassiness."

Flavor: "The hops hit in the front with this beer. Grapefruit sweetness and bitterness that carry through. Some lemon, a little onion-like character. The bitterness hits and is lingering through the finish. Malt is moderately biscuity and a bit light for the hops. Warmth hits at the end."

Overall: "What we'd now call a classic double IPA. Loads of hops flavor (interesting melon and earthy combos) with a moderate amount of biscuity malt. Alcohol is noticeable and not offensive. Lower in hops aroma than one might expect from a double IPA, this nonetheless delivers a potent, bitter, hoppy drinking experience. The more I drink this beer, the more the juicy character develops."

AROMA: 11
APPEARANCE: 3
FLAVOR: 18
MOUTHFEEL: 4
OVERALL: 10

91



Wormtown Hopulence

| ABV: 8.5% | IBU: 120 | SRM: N/A |

What the brewer says

"Emphasizing Amarillo, Horizon, Summit, and Glacier hops with support from five other American varieties. Hops were added in every conceivable part of the brewing process."

What our panel thought

Aroma: "Skunky dankness, lemony hops, and notes of grainy sweetness. A little citrus character in the back adds sweet fruit-juicy notes. Elements of tropical fruits, dried morel mushrooms, freshly tilled soil, and orange."

Flavor: "Bright and clean hops profile fades quickly into a nice, lightly sweet grainy finish. Simple and clean. Lemon tartness and light pine flavors dominate. The hops fruit character is showcased here and carries through the finish. A slight bitterness but not too bitter. Some nice warmth is present in the finish as well. Appreciable malt body leads to a long, smooth, balanced finish."

Overall: "Simple for a double IPA, but quite balanced. Rather full-bodied. Just enough bitterness to cut through the malt and lots of citrus notes with a big dank/earthy punch. Those who don't love super-bitter IPAs will really enjoy the balance in this. This beer was great."

AROMA: 12
APPEARANCE: 3
FLAVOR: 19
MOUTHFEEL: 4
OVERALL: 10

97

TOP RATED



21st Amendment Down to Earth

| ABV: 4.4% | IBU: 42 | SRM: N/A |

What the brewer says

"Whether you have a long mission behind you or a full afternoon ahead, this session IPA will help keep things real. More relaxed than an IPA, but with all the hops aroma and flavor."

What our panel thought

Aroma: "Oranges, bananas, maybe a little hay. Some toast. Big tangerine notes with coconut and mango. Touch of dank and resinous hops aroma. Strong pine character. Pleasantly assertive hops nose."

Flavor: "Flavor is consistent with the aroma. I have to search to find a lot. Tropical fruit and some citrus peel sits on top of a surprisingly sturdy malt foundation. A little bit of caramel in there. The bitterness is delightful, with a long, citrus-like finish. Full fruity hops flavor. In contrast to some of the others, hops flavor is what persists into the finish."

Overall: "An enjoyable beer, one I would happily quaff at a backyard barbecue. The long citrusy finish is sure to delight many—I'm guessing Citra hops in large amounts. I keep coming back to 'sweet' as a descriptor for this beer, but it's very refreshing and enjoyable. A nicely balanced celebration of hops in session form. Elegantly made."

AROMA: 12
APPEARANCE: 3
FLAVOR: 19
MOUTHFEEL: 4
OVERALL: 10

94



Alpine Hoppo Birthday

| ABV: 5.2% | IBU: 69 | SRM: N/A |

What the brewer says

"Made with six different hops, this bold brew is refreshing enough to enjoy again and again."

What our panel thought

Aroma: "Tropical fruit (mangos and pineapple) with an earthy finish. Some fresh hay aroma from dry hopping. The aroma changes as the beer opens—from fruity to more earthy. Lemon-drop candy, pine needles, grass, and spruce tips. Caramel malt character adds balance and interest. Spicy hops with herbal notes of mint, oregano, and thyme."

Flavor: "Full-flavored—lots of sticky hops and some bready malt. Some earthy hops flavors with lemon peel, herbal notes, and pine needles are supported by a fun caramel malt depth. Bitterness is appropriately firm but not overdone. Residual front-of-the-tongue bitterness/astringency is surprising but far from unpleasant."

Overall: "Earthy and satisfying, this IPA has a commanding presence. The hops flavors lean toward the spicy/woody end of the spectrum. An enjoyable session IPA that offers a bit more character than is often typical in this category. More like a hopped-up American pale ale in many ways."

AROMA: 11
APPEARANCE: 3
FLAVOR: 17
MOUTHFEEL: 4
OVERALL: 9

85



Ballast Point Even Keel

| ABV: 3.8% | IBU: 40 | SRM: N/A |

What the brewer says

"Ten different malts and six different hops combine to create this full-flavored, small beer. This session ale is herbaceous with additional citrus aromas of lemon and grapefruit. The orange to copper hue draws you in."

What our panel thought

Aroma: "Pineapple, mango, and orange with little to no malt or yeast character on the nose. A rich wave of tropical fruit hops that evoke mango, pineapple, and a bit of coconut. Solid nose promises a real beer. Light pine and resin."

Flavor: "Pineapples, bananas, and mangoes. Long bitterness that's slightly harsh atop a weaker than expected malt body. As it is, the fruit flavor falls somewhat flat compared to the aroma. The assertive bitterness is a bit out of balance because there's not much malt to balance it. Bitterness dominates the finish—the earthy hops flavor sticks around for a little while, but doesn't have as much staying power."

Overall: "A decent attempt at making a sessionable IPA, but the overall impression is thin and one-dimensional. The lovely aroma suggests more than is delivered on the palate."

AROMA: 12
APPEARANCE: 3
FLAVOR: 17
MOUTHFEEL: 4
OVERALL: 9

90



Boulevard Pop Up Session IPA

| ABV: 4.3% | IBU: 41 | SRM: N/A |

What the brewer says

"Boulevard Pop-Up Session IPA is built for frequent excursions, with a very drinkable character and relatively low bitterness tucked behind a big, fruity hops aroma."

What our panel thought

Aroma: "Surprisingly malty nose with light caramel and toastiness. Mild paper oxidation. Faint hops aroma is earthy, like damp soil, but hard to find. Cloves, orange peel, toast, yeast, and hints of black pepper."

Flavor: "More hops in the flavor, offering an herbal blend of mint and marjoram, but the malt is far more forward—grainy with some toasty notes. Papery oxidation here, too, and mild bitterness. Hops flavor seems muddled and indistinct. Instead, I get a more saison-like quality with yeast esters and phenols. Cloves and even a bit of cracked black pepper, then a dry, bitter finish."

Overall: "Is this a session saison? The yeasty aromatics and flavors seem more at home in a Biere de Table than in an American session IPA. I actually quite like this beer, but it works better as a generic Belgian-style table beer. Tartness when I swallow lingers on the back of the tongue. Very dry finish."

AROMA: 11
APPEARANCE: 3
FLAVOR: 16
MOUTHFEEL: 4
OVERALL: 8

82



Captain Lawrence Effortless IPA

| ABV: 4.5% | IBU: 45 | SRM: N/A |

What the brewer says

"Domestic and imported malts play the back seat to the loads of American-grown hops that were dumped into both the kettle and the fermentor. Dry hopped for a mouthwatering aroma with Mosaic and Palisade hops."

What our panel thought

Aroma: "Spicy hops aroma with a touch of floral bouquet, maybe even perfume-y, and mild citrus undertones. Caramel, tangerines, some evergreen. Very crisp and clean."

Flavor: "Hops flavor hits, emphasizing resinous pine with a bit of cattiness. A little bit dank—the citrus notes are still there, but I'm not getting the floral quality from the nose. Clean bitterness that doesn't overpower. Orange zest, wet earth, and Capri-Sun. Caramelly malt character less apparent than on the nose. Resinous and mouth-coating fruity hops express themselves in the flavor, following through on the aroma."

Overall: "A good example of style, but I wish the flavor had more of the hops character from the nose. Tropical fruits dance alongside a firm malt depth (for a beer of this strength), and a sufficient bitterness. A fun session beer that doesn't bite off more than it can chew."

AROMA: 11
APPEARANCE: 3
FLAVOR: 17
MOUTHFEEL: 4
OVERALL: 9

88



Firestone Walker Easy Jack

| ABV: 4.5% | IBU: 47 | SRM: 4.5 |

What the brewer says

"Brewed and dry hopped with a globe-trotting selection of newer hops varieties from Germany, New Zealand, and North America. This beer delivers massive hops aromas, surprising dimension, and a signature malt balance."

What our panel thought

Aroma: "Citrus and pine is subdued. Candied lemon peel, evergreen, herbal. Very mild nose. Fresh grapefruit yumminess from the hops. Some clean light malt in background."

Flavor: "Nice citrus flavor with some pine, mild bitterness, and strong carbonation. Lemongrass, wet earth, pineapple, and honey over a light but silky malt body. Clean and crisp—hops dominate the flavor profile."

Overall: "Nicely balanced flavor and aroma. This beer gets much better as it warms. The honey-like malt character supports an interesting array of hops notes that are unique and deliver something apart from your typical session IPA. This is a fairly light, refreshing beer. Some astringency in the aftertaste, but still refreshing and balanced. Where most of the others are trying to emphasize the 'IPA,' this one is going for 'session' and succeeding."

AROMA: 11
APPEARANCE: 3
FLAVOR: 18
MOUTHFEEL: 4
OVERALL: 9

90



Flying Dog Easy IPA

| ABV: 4.7% | IBU: 50 | SRM: N/A |

What the brewer says

N/A

What our panel thought

Aroma: "Citrus and tropical fruits—tangerine and mango and maybe some pear. Evergreen, citrus, mint, and earth in a faint, dainty aroma that reveals few secrets. Hops character is like a Christmas tree at the end of the season—pine and wood are still evident, but fading as they lose their luster."

Flavor: "Malt has a light crystal undertone. Earthy hops flavor with citrus and pine is followed by grainy malt and a dry, moderately bitter finish. Nice creaminess in the mouthfeel. Perception is rustic and rough more than delicate and refined. A light dollop of malt comes in right at the swallow and then disappears, leaving a clean bitterness and lingering hops."

Overall: "This beer drops off as it warms. The aromas fade, and a light butter finish comes out. Some spicy notes verge on vegetal—parsley or celery. Middle of the road on bitterness, flavor, and aroma. Light in body and light on the tongue. All in all, fairly decent with clear hops character, even if the hops aren't as far out there as some of the competition. Dependable."

AROMA: 10
APPEARANCE: 3
FLAVOR: 17
MOUTHFEEL: 5
OVERALL: 9

88



Fort George Overdub IPA

| ABV: 4.5% | IBU: N/A | SRM: N/A |

What the brewer says

"Pouring a solid gold with a crisp white head, Overdub IPA is a sensory overload of mango and papaya hops aromas, dank grapefruit tones, and mellow citrus finishing notes."

What our panel thought

Aroma: "Citrusy, lemony, with a bit of tangerine and tropical fruit punch. Little to no malt aroma. Mild hops nose with light coconut and pineapple notes."

Flavor: "More tangerine in the flavor than in the aroma, but less of the lemony citrus. Juicy hops flavor with enough malt sweetness to support it. Bitterness balances the malt without overpowering. More of that coconut and pineapple, buoyed by the caramel malt and light toffee. Bitterness lasts into the aftertaste, but some malt stays with it."

Overall: "One of the better session IPAs I've had, like a Deschutes Fresh Squeezed 'Lite.' Tropical-fruit character combined with caramel malt depth makes it imminently drinkable. I could easily knock back several of these and make it a true session—something I can't always say about this style. The overall impression is that this seems sweet for a session IPA, but the flavors work well enough."

AROMA: 11
APPEARANCE: 3
FLAVOR: 17
MOUTHFEEL: 4
OVERALL: 9

88



Great Divide Lasso

ABV: 5% | IBU: N/A | SRM: N/A |

What the brewer says

"Brewed with a robust roundup of Columbus, Centennial, and Cascade hops, its sessionable simplicity proves bigger isn't always better."

What our panel thought

Aroma: "Tangerines, caramel, tropical fruit, and lemon—smells sweet and malty with a bit of cotton candy and some grassy, herbal, slightly earthy hops aromas."

Flavor: "Tropical fruit and moderate caramel—herbal, toasty, and crisp. Good mouthfeel and body, followed by just the right amount of bitterness. Flavor hops don't make a big impression, though, because a rounded bitterness dominates. Very dry finish with some lingering bitterness that fades into a pleasant afterglow."

Overall: "Tropical fruits and citrus in the hops flavor, followed by a bigger-than-normal malt character gives this a pleasant richness that doesn't sacrifice drinkability. This one is mostly about bitterness, but—to its credit—isn't harsh about it. A solid example of the style with nice hops flavor, proper bitterness, and a substantial body for a session IPA. Could pass for an English pale ale."

AROMA: 10
APPEARANCE: 3
FLAVOR: 17
MOUTHFEEL: 4
OVERALL: 9

86



Green Flash Jibe

ABV: 4% | IBU: 65 | SRM: N/A |

"Well-balanced, floral, citrus, and vibrant hops character defines our idea of what a perfect session ale should be."

What our panel thought

Aroma: "Light floral hops aroma with an undercurrent of lemon and maybe mint. Delicate kiss of clean malt sweetness and cereal. Pine needles, a little grapefruit, perhaps a touch of biscuit. As it warms, earthy components reminiscent of wet leaves comes into play."

Flavor: "Very distinctive citrus hops—lemon, tangerine, and a bit of grapefruit. There's just enough malt sweetness with the tart citrus to evoke Lemon Heads candy before the bitterness rolls in smoothly. As the beer warms, an earthy mushroom-like character develops, which adds complexity and keeps me interested. Malt body is rather thin."

Overall: "Nicely balanced, although the bitter finish could be toned down just a little. Flavorful—it may be a session but it doesn't compromise a lot. An enjoyable low-octane IPA that offers enough hops character for hopheads but remains a drinkable and well-balanced beer. Smooth and refreshing—a light, hoppy beer that would pair well with an afternoon in the hammock."

AROMA: 11
APPEARANCE: 3
FLAVOR: 18
MOUTHFEEL: 4
OVERALL: 10

92



Heavy Seas Crossbones

ABV: 4.5% | IBU: 35 | SRM: N/A |

What the brewer says

"Bursting with floral and citrus notes, this has a strong malt backbone to support all of that hoppy goodness. With its big body, smooth finish, and lingering citrus flavor, it's hard to believe that it's 4.5 percent ABV."

What our panel thought

Aroma: "A touch of butterscotch immediately hints at diacetyl. Pine and resin hops aroma take over with oranges and herbs—perhaps some Mexican oregano. Grassy, earthy hops with woody undertones. Medium-toasted malt fruity esters of peach and cherry."

Flavor: "Citrus fruit and pine hops flavor. Light malty, grainy flavor in the background. Oranges, grapefruit, and grass. Slight biscuity notes. Pleasant tart bitterness, then the butterscotch barrels in. Reminds me of the old days with Red Hook or Bert Grant's beers. The diacetyl softens the palate, but is an acquired taste. The base beer seems good."

Overall: "Could use more hops flavor to match the intensity of the bitterness. Buttery aroma was out of place. An enjoyable pale ale that calls itself an IPA. Earthy/dank undertones give the beer a gravity or heft, but the diacetyl is too dominant, relative to the hops."

AROMA: 10
APPEARANCE: 3
FLAVOR: 16
MOUTHFEEL: 4
OVERALL: 8

82



Left Hand Introvert

ABV: 4.8% | IBU: 55 | SRM: N/A |

What the brewer says

"Hops aromas of tropical papaya and kiwi with woody pine, balanced by honey malt and a clean bitter finish."

What our panel thought

Aroma: "Spicy hops character—some wet earth notes. Pine needles and grape must. A touch of funk and a bit of honey. Herbal/grassy hops aroma with some earthy elements. There's a touch of candy sweetness and fruity esters (light bubblegum)."

Flavor: "Hops flavor is resinous and tongue tingling. Medium malt backbone sufficiently supports hops. Notes of pine, earth, damp leaves, some must, and grass. The touch of light caramel sweetness is nice. A bit of pucker in the dry, bitter finish. Subsequent sips yield more hops tastes—grassy, woody—but the bitterness grows with each sip. Moderate fruity esters and a touch of malt sweetness, but mostly buried under the hops."

Overall: "Lots of flavor without being overwhelming. If I didn't know it was a session IPA, it could pass as a full-strength IPA. Concentrates on the earthy and grassy more than the fruity and citrusy. A bit of funk both in the flavor and aroma adds complexity and interest."

AROMA: 10
APPEARANCE: 3
FLAVOR: 17
MOUTHFEEL: 4
OVERALL: 9

86



New Belgium Slow Ride

| ABV: 4.5% | IBU: 40 | SRM: N/A |

What the brewer says

"A pour of sheened gold and fluffy, white foam. A blend of eight hops varieties, led by Mosaic and Nelson Sauvin, twist together tropical scents of melon, peach, lime, and grapefruit. The flavor mirrors the aroma."

What our panel thought

Aroma: "Hops express as citrus and pine with some fruity orange notes. Malt is subtly bready, hiding behind the hops. Very fresh like a spring herb garden. Soft, well-rounded hops aroma. Nice blend of tropical fruit (papaya, mango, light pineapple) and spicy hops character. Hints of Thai basil and oregano. Very intriguing."

Flavor: "Earthy, wet, piney, and herbal. Flavor picks up where the nose left off. Similar elements here, with the spiciness more in the fore, adding some lemongrass to the other herbal elements. Light bitterness doesn't distract from the hops flavor."

Overall: "A balanced, pleasant, and quaffable brew. The mix of hops rounds out the rough edges, and hops bitterness is lower than some other examples making this beer very approachable. Body has good depth but minimal character. Overall, a pretty good session IPA."

AROMA: 11
APPEARANCE: 3
FLAVOR: 17
MOUTHFEEL: 4
OVERALL: 10

90



Oskar Blues Pinner Throwback

| ABV: 4.9% | IBU: 35 | SRM: N/A |

What the brewer says

"With tropical fruits, citrus juices, pineapple, and spice berry up front in the aroma and flavor, the biscuit and toasted bread at the back balance out all the hops and make a great finish."

What our panel thought

Aroma: "Tropical fruit punch, honeydew melon, pineapple, papaya, and vanilla cake frosting. Light malt background—mildly bready. Light grassy finish like a fresh-mown lawn. Complemented by light fruity esters."

Flavor: "Vanilla, mint, tropical fruits, and a light caramel malt sweetness make for a unique flavor. Crisp carbonation and a light body deliver refreshment upon which the interesting flavors are layered. Hops bitterness is appropriately firm and completely in balance. Fresh and juicy. Aftertaste features a soft, rounded bitterness. Light but not thin-bodied."

Overall: "The vanilla cream aspect makes this one of the more unusual session IPAs out there, but it's a risk that works well. Tropical fruits add complexity, and the light body makes it refreshing. A fun, unique choice in a field of homogeneity. Very nice. Very refreshing and crisp."

AROMA: 12
APPEARANCE: 3
FLAVOR: 18
MOUTHFEEL: 4
OVERALL: 10

93



Otter Creek Over Easy

| ABV: 4.6% | IBU: 40 | SRM: N/A |

What the brewer says

"Straight from our stash to your glass, we've created a chronically crushable ale that turns over easy without exhausting the palate."

What our panel thought

Aroma: "Fruity, yeasty, wheat-like, orange zest, honey, almost a wittber-like quality. Medium rich malt aroma with almond notes. Delicate hops aroma with hints of citrus and spiciness, and very faint pine."

Flavor: "Really nice creamy mouthfeel. Soft but appropriate carbonation lends a British-like weight on the tongue. Grainy malt body is a little rough around the edges but satisfying nonetheless. Bitterness has a nice orange-like quality but doesn't really come out until well into the aftertaste."

Overall: "A fun session IPA! In a field of beers that can seem monolithic, this one stands out as spritzy and fun. Lovely carbonation makes for a better-integrated experience. Touch of caramel adds depth to the overall experience. Lingering hops bitterness is a bit overdone, but still it's a very nice, easy-drinking beer. The elements are here, without being too assertive, which seems fitting for a session beer."

AROMA: 10
APPEARANCE: 3
FLAVOR: 18
MOUTHFEEL: 4
OVERALL: 9

88



Sam Adams Rebel Rider IPA

| ABV: 4.5% | IBU: 45 | SRM: N/A |

What the brewer says

"Bursting with bright citrus and tropical fruit notes of apricot and tangerine, with hints of pine and a slight resinous character, this IPA finishes with just enough subtle bitterness to bring you back for another sip."

What our panel thought

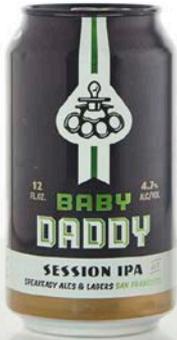
Aroma: "Lemony, citrusy goodness is a refreshing change from grapefruit. A bit of pine and some grainy sweetness. Light herbal and woody aroma and sweet malt. Bready and grainy. Nutty esters—like pistachio."

Flavor: "Lemongrass, a hint of hay, pleasant but slightly subdued grain-malt sweetness. A little less hops flavor than is suggested in the aroma, but it's nice nonetheless. Hops flavor becomes more interesting as the beer warms. Refreshing bitterness. Watery hops flavor is more distinctive than in the aroma, offering pine-tree notes and woodiness."

Overall: "A lovely little IPA-esque ale. Nothing I'd go out of my way to get, but would gladly order it in a sea of adequate beers. The lemony aroma is especially enticing. Malt flavor is too pronounced relative to the hops character or bitterness level, but there's lots of complexity in the aroma."

AROMA: 10
APPEARANCE: 3
FLAVOR: 16
MOUTHFEEL: 4
OVERALL: 8

83



Speakeasy Baby Daddy

| ABV: 4.7% | IBU: 35 | SRM: N/A |

What the brewer says

"Sunny straw in color and loaded with hops. The aroma and flavor yield citrus and tropical notes: grapefruit, melon, lime, passion fruit, and a touch of spice. It has a full balanced body, with a crisp finish and low bitterness."

What our panel thought

Aroma: "Fruity and spicy. Citrus notes followed by catnip. Fresh-mown lawn along with pineapple, banana, and a light earthy/woody base. Could benefit from a stronger nose."

Flavor: "Smooth malt, slightly sweet. Full body for a session-strength beer. Coconut, pineapple, black tea, and hints of toast. Bitterness is supportive but not overpowering. Finish is balanced between hops flavor, bitterness, and a light malt. Moderate fruity esters."

Overall: "Firm bitterness lingers just long enough. Nice mix of fruity hops and esters with a medium-sweet malt base. Just a bit of butter in the finish detracts from drinkability. An okay session IPA with acceptable hops character, but a touch watery and one-dimensional relative to others in the category. Seems more like a normal pale ale than a session IPA, but that's just an arbitrary distinction."

AROMA: 10
APPEARANCE: 3
FLAVOR: 16
MOUTHFEEL: 4
OVERALL: 8

83



Stone Go To IPA

| ABV: 4.5% | IBU: 65 | SRM: N/A |

What the brewer says

"This session IPA delivers all the fruity, piney character of a much bigger IPA. To accomplish this, we employ 'hop bursting' to coax out extreme flavors and aromas while also imparting a burst of pleasant bitterness."

What our panel thought

Aroma: "Tangerines, a little grass, hints of evergreen needles, citrus, light malt character. Like a Christmas wreath or walking through a thick evergreen forest. A touch of spiciness. Mild fruity esters."

Flavor: "Whoa, that's some grass! Reminds me of fresh-cut grass, but more clippings than lawn. Tons of pine in there accentuate the grassy notes. A pleasant malt sweetness offers support, and an assertive bitterness completes the off-dry finish. This tastes like a hops tea with a moderately strong bitter finish. Very little malt to soften the blow."

Overall: "If you like piney, grassy hops flavor and aroma, this is the session IPA for you. The assertive evergreen character is balanced by a surprising malt backbone and sufficient bitterness make it a solid session IPA—what I would expect from a competent brewer. A little more malt would soften some of the rough edges."

AROMA: 11
APPEARANCE: 3
FLAVOR: 17
MOUTHFEEL: 4
OVERALL: 9

87



Two Brothers Sidekick

| ABV: 5.1% | IBU: 36 | SRM: N/A |

What the brewer says

"Sidekick extra pale ale is a golden colored ale that is loaded with juicy citrus and passion fruit hops aroma yet balanced with malt and hops character. A true companion."

What our panel thought

Aroma: "Fresh tropical fruit—mango and pineapple—with a touch of light tangerine citrus. Some esters of berry or stonefruit. Light malt is bready and delicate. Slightly catty and piney hops aroma. Catmint and catnip aroma. A bit piña colada—like, along with earthy undertones."

Flavor: "Full assertive hops flavor—resinous and sticky with earthy, grassy notes from dry hopping. Bitterness might be a tad low, but nice. Hops are catty and dank with a bit of skunk."

Overall: "Tastes like fresh hops. Lots of juicy tropical hops flavors—is that Mosaic? Very tasty—easy drinking without being boring. Some drinkers will lock into this hops profile and feel right at home, even though my palate is not as big a fan. A pleasant and harmless beer that won't distract you from the task at hand—drinking lots and lots of it."

AROMA: 11
APPEARANCE: 3
FLAVOR: 18
MOUTHFEEL: 4
OVERALL: 9

89



Two Roads Lil' Heaven

| ABV: 4.8% | IBU: N/A | SRM: N/A |

What the brewer says

"Made with four exotic hops: Azacca, Calypso, Mosaic, and Equinox. Taste is of tropical fruits, specifically passion fruit, grapefruit, and apricots. Finishes with just enough toasted malt character to balance."

What our panel thought

Aroma: "Light citrus and tropical fruit—tangerine and mango with a dash of pineapple. Light and delicate esters of pear and rose. Lemon, hay, bits of pine, and rustic earth. Some cheese as it warms. Slight papery oxidation begins to come out as the hops dissipate."

Flavor: "Soft and delicate with a malty sweetness mid-palate. Hops bitterness is mellow but sufficient to put this in the IPA range. Herbal, woody, and earthy—might make for a great mushroom sauce. Malt body is well-rounded, supple, and welcome."

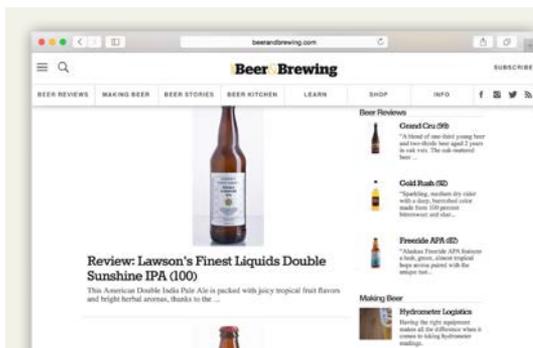
Overall: "Very drinkable and refreshing. If you like hops that err on the side of earthy and woody, give this one a try. I'd like to use this to make a pan sauce with sauteed mushrooms. Bitterness is firm but nicely restrained. Nice flavor—fruity citrus and pine. A bit too light to mask the oxidation, but it's a straightforward example of the style."

AROMA: 11
APPEARANCE: 3
FLAVOR: 17
MOUTHFEEL: 4
OVERALL: 9

87

IPA SCORES FROM THE ARCHIVES |

							
Bear Republic Racer 5 IPA	Cigar City Jai Alai IPA	Deschutes Inversion IPA	Firestone Walker Union Jack IPA	Founders Centennial IPA	Green Flash West Coast IPA	Lagunitas IPA	New Belgium Ranger IPA
94	86	85	100	93	89	92	89
							
Odell IPA	Rogue Brutal IPA	Samuel Adams Rebel IPA	Sierra Nevada Torpedo IPA	Ska Brewing Modus Hoperandi	Stone IPA	Alaskan Hopothermia	The Alchemist Heady Topper
95	84	96	90	96	96	88	91
							
Dogfish Head 90 Minute	Firestone Walker Double Jack	Lagunitas Sucks	Lawson's Double Sunshine	New Belgium Rampant	Odell Myrcenary	Russian River Pliny The Elder	Sixpoint Resin
85	98	97	100	81	97	93	99
							
Stone Ruination 1.0	Victory DirtWolf	Avery Maharaja	Dogfish Head Burton Baton	Evil Twin Molotov Cocktail	Green Flash Palate Wrecker	Founders All-Day IPA	Lagunitas Daytime IPA
95	93	91	100	93	93	91	97



Read more New IPA Reviews On BeerAndBrewing.com

This issue's IPA review sessions were our most ambitious ever, and our panel tasted and reviewed more than 110 different IPAs, Double IPAs, and Session IPAs. We chose 83 of those reviews for the magazine you're reading now, and the remaining reviews are all live on our website—beerandbrewing.com. Visit today for the panel's thoughts on New Holland Mad Hatter, La Cumbre Project Dank, Tree House Alter Ego, Alpine Nelson, Deschutes Fresh Squeezed, and much more. In addition, read the full tasting notes for the archived reviews above.

ASK THE EXPERTS

Whirlpooling: The Tea Leaf Paradox

In this month's "Ask the Experts" column, we explore the technique of whirlpooling and look at ways to do it at home on a small scale.

WHIRLPOOLING IS A COMMON

practice in North American breweries. It is a post-boil technique, the original purpose for which was to separate trub (mostly hops particles and precipitated proteins) from wort. But in a turn of events that should not be at all surprising to anyone even vaguely familiar with American craft beer, brewers have now adopted the whirlpool as yet another opportunity to introduce hops into the brewing process.

If you'd like to do a whirlpool at home, it helps to first know a little bit about tea leaves.

Mechanics

The whirlpool relies on what physicists call the "tea leaf paradox." It's the phenomenon by which light particles, such as tea leaves or trub, collect in the center of a stirred vessel of liquid and settle to the bottom in a neat little pile after the stirring stops.

Normally, we associate spinning with a tendency for things to move outward, like when you ride the big swing carousel at an amusement park. What is colloquially called centrifugal force (but is really just your momentum attempting to keep you moving in a straight line) pushes

you toward the perimeter as the carousel spins faster and faster, while a centripetal tension force within the swing's chain keeps you from flying off and landing in the corn-dog stand.

In a rotating volume of liquid, however, there is a solid boundary (the kettle wall) beyond which liquid cannot move. Furthermore, friction at the solid-liquid interface (the wall and the bottom of the kettle) slows the spinning liquid more effectively at the edges than the liquid slows itself in the middle. The resulting pressure difference (the higher the speed, the lower the pressure) induces a secondary circulation that flows down along the wall, then inward along the bottom of the kettle toward the center, up the central axis of rotation, and finally, when it nears the surface, back toward the wall. (Attention science nerds! This is classic Ekman flow.)

Thus, as wort spins within the kettle, there's a second, weaker flow pattern under the surface that we barely notice unless we're specifically looking for it. When we stop forcing the liquid to spin, that secondary circulation pulls light particles such as hops and trub toward the center of the kettle, where they deposit themselves neatly into a little cone.



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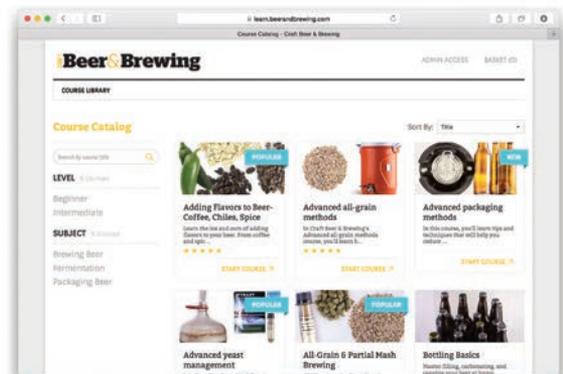
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Applications

The reason the whirlpool was invented in the first place was to push sediment toward the center of the kettle after the boil. Once all of the trub is collected in a nice compact cone, a dip tube near the perimeter can cleanly drain clear wort out of the kettle, through the chiller, and into the fermentor. It's a great way to promote wort clarity and keep a plate chiller from getting clogged.

However, craft brewers have long used the whirlpool as an additional place to introduce hops. Why? Well, the whirlpool is conducted while the wort is still hot—remember, it hits the chiller afterward. The whirlpool might last for 15 to 30 minutes, so crafty brewers decided to steep extra hops in this spinning vat of hot wort to extract additional flavor, aroma, and even bitterness. It's sort of like an extended hopback.

DIY Whirlpool

So how do you execute a whirlpool at home? Well, the pros actually pump wort from the base of the kettle and reinject it near the surface of the wort. It's pumped in tangentially to the kettle wall at high speed, which sets up the spinning pattern, and once the whirlpool gets going, it keeps going until they shut off the pump and wait for it to settle down.

At home, there are a few ways to do this. Some retailers now sell special-built kettles that feature a tangential inlet near the top, for the express purpose of pumping in wort from the bottom and creating the desired effect. You can do the same thing without such an inlet if you just place the outlet of the pump's hose beneath the surface of the wort, although you'll want some way of securing the hose in place.

The cheapest option, though, is to just grab the biggest spoon you've got and give that kettle of wort a good stir. I actually like to do this with an immersion wort chiller so that the wort cools down during the whirlpool. This method is only limited by your arm's stamina. If you want to use this time to introduce additional hops, add them when you start stirring or pumping so that they have contact with the hot wort while you get it started.

Regardless of how you set up your whirlpool, it's a good idea to keep it moving for at least a couple of minutes to ensure that the

So how do you execute a whirlpool at home? The pros actually pump wort from the base of the kettle and reinject it near the surface of the wort. Some retailers now sell special-built [homebrew] kettles that feature a tangential inlet near the top, for the express purpose of pumping in wort from the bottom and creating the desired effect. The cheapest option, though, is to just grab the biggest spoon you've got and give that kettle of wort a good stir.

entire volume is moving and that the hops particles and protein trub are nicely suspended throughout the wort. Then, when you're ready to stop, just cut off the pump (or stop stirring) and let the whole thing sit, undisturbed for at least 15 minutes—preferably 30—to let the trub settle out.

If you chill your wort as it whirlpools, it's a good idea to have a sanitized lid or some sanitized aluminum foil on hand to cover the pot while everything settles. If, however, you whirlpool first and then chill after the trub cone has developed, it's best to leave the kettle uncovered so that dimethyl sulfide (DMS) precursor *s*-methyl methionine (SMM) and other volatile compounds don't get trapped within. No need to worry about contamination as long as the wort remains hot enough to kill nasties (above 180°F/82°C).

Hop Stand

If all of this bother with spinning wort isn't your cup of tea, you can still extract additional hops character after the boil by conducting what is known as a hop stand. This is super simple and requires very little effort on your part. All you do is have your whirlpool hops ready to go when you cut the flame on the boil and then add them to the hot wort. Then you just wait for the amount of time specified in the recipe. That's it.

So, if you decide to brew up Matt Gallagher's Less Thinking IPA (page 66), and you don't want to actually bother with the whirlpool, you can just add the 1.5 oz (43 g) of Amarillo and 0.5 oz (14 g) of Centen-

nial at knockout and then wait—anywhere from 10 minutes to an hour is fine. The longer you wait, though, the more IBUs you'll get out of the hops, so if you perform a hop stand using a high alpha-acid variety in a recipe of your own design, you might want to take your bittering charge down a notch or two to account for those extra iso-alpha acids.

Other Considerations

The whirlpool (or hop stand) is typically conducted just off the boil, so a little shy of 212°F (100°C) in most locales at or near sea level. That's high enough a temperature to extract bitterness from any whirlpool hops you add and to make infection rather unlikely.

But if it's only flavor and aroma you want, you could always cool the wort to about 150°F (66°C) first and then conduct your whirlpool or hop stand. At this temperature, you'll extract delicate hops oils without isomerizing alpha acids. Contamination is more of a concern at these temperatures, though, so be extra vigilant with your sanitation routine.

Whether you pump, stir, or stand, the period immediately following the boil is a great opportunity to bring in hops character and clarify wort on its way from the kettle to the fermentor. And when you're brewing a great American IPA, clarity and hops are the name of the game. 

If you have a question for the experts, email us at info@beerandbrewing.com or visit our website at beerandbrewing.com.



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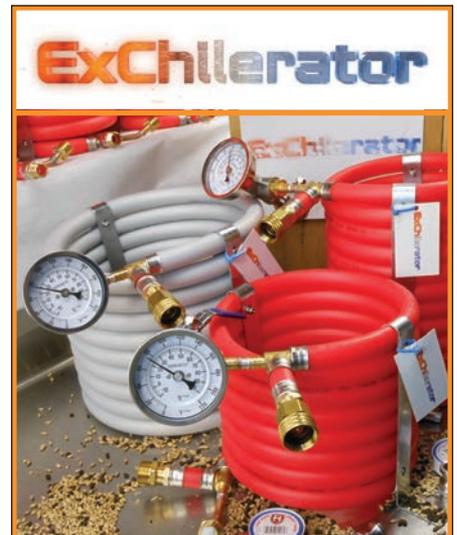
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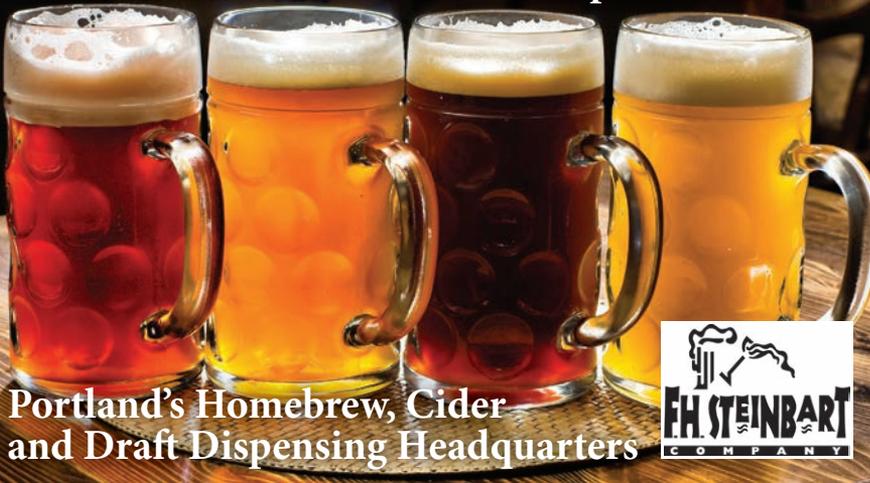
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Art of the Hops

We wouldn't have IPAs without them. Matt Graves's extreme close-up portrait of this hops cone seems like a fitting way to close our annual IPA issue.