The Barleycorn Press

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Stovetop Octoberfest: Essex Junction woman brews award-winning beers

by Lauren Ober - Free Press Staff Writer (reprinted from The Burlington Free Press - September 27, 2008)

ESSEX JUNCTION --

Anne Whyte's kitchen doesn't smell like most mother's kitchens.

The faint tang of alcohol hangs in the air and mixes with a sharp, hoppy aroma. It's not apple pie and freshly baked bread, but Whyte likes the smell. If she didn't, she couldn't be a homebrewer.

Whyte, 49, has been brewing beer for 20 years. She also owns Vermont Homebrew Supply in Winooski with her husband, Matt, so she understands the business end of homebrewing as well as the technical side.

Whyte says that when she began brewing beer, she wasn't taken seriously because she was a woman. At that time, women didn't brew beer much, and Whyte was something of an anomaly.

Although more people have taken up brewing as a hobby, Whyte finds she's still one of the few female homebrewers.

Whyte came from a family of gardeners and canners and people who made things from scratch, but she never knew people could make their own beer, she said. After a two-day homebrew class, Whyte was hooked, but she had a long way to go before she made anything palatable.

Making connections with fellow brewers and being taken seriously was difficult. No men thought she was truly dedicated to the craft, and she said it was difficult to get help and advice.

Her second year brewing, Whyte learned about a homebrew club. There she was welcomed into the fold.

"They were great," Whyte said. "They were so psyched to have a woman."

For a while, Whyte was "the woman," as referred to by the other club members. It was through the club that Whyte honed her brewing technique.

Whyte now has about 100 recipes for beer stored on her computer. It's like Oktoberfest in her house all year round because Whyte is always brewing, even in her "jammies and bare feet." Homebrewers are allowed to brew up to 200 gallons of beer a year, and that's about what Whyte makes. It's plenty to last her family and many of her friends for the year. Her cellar is full of bottles with labels scrawled in pen.

Recently, Whyte brewed a batch of American pale ale in her kitchen using hops she grew in her backyard. First, she heated five gallons of water on her stove to about 150 to 160 degrees. She poured it into a bucket full of malted barley -- a process called "doughing in."

Whyte put the mash in the oven to cook for an hour before explaining that her process is as homebrew as you can get. Many homebrewers use fancy computerized equipment that does most of the work for them. Whyte uses kitchen pots, a basic stove, buckets and a little plastic tubing to craft her beer.

Tim Cropley, past president of the Green Mountain Mashers, Whyte's homebrew club, said her low-tech approach to brewing was clearly an asset. Whyte's beer is "awesome," Cropley said.

"I don't know too many people who use the oven like she does," Cropley said.

Whyte has an encyclopedic knowl-

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NEXT MEETING 7PM at Anne and Matt Whyte's Monday Oct 6th

The next meeting of the Green Mountain Mashers will take place on Monday, October 6th at the home of Anne and Matt Whyte.

Terry Bradshaw of Lost Meadow Orchard & Cidery will be coming as our guest. He makes some of the best cider Anne has ever had, and specializes in the Breton style. An earlier start time is needed so let's make it 7:00 for a start time.

Agenda:

1. Cider discussion with Terry Bradshaw of Lost Meadow Orchard & Cidery.

2. Chapin Cider Crush Details
3. 20th Anniversary Glassware Update.
4. Masher Challenge Beer.
5. Old and New Business.

Directions:
From Burlington take route 15 into Essex Jct. The last right before 5 Corners is School St. Take that right and it is on the right, #10. It's the 2nd house and the porch light will be on.

From Williston: Driving into Essex Jct. on Route 2A you will take a left onto Park Terrace, the road between Ming's Chinese Rest. and The Chittenden Bank. As you drive up Park Terrace you are looking at our house at the top of the hill. Park anywhere on the right side of School Street.

If you have any questions, call Vermont Homebrew Supply at 655-2070 or Anne and Matt at home (879-6462).

September Meeting Notes
by Jerry Gormley & Todd Metcalf

1. Darell won the clone competition in June. It was a Sierra Nevada pale ale clone. He has yet to decide what the next clone challenge should be.

2. 20th Anniversary glasses. Ruth is to look into it prices, styles. Come up with a couple of ideas and let the group vote.
- There were some questions. Is this really the 20th anniversary?

3. Next meeting is at Anne's house. This was up to debate since Anne wasn't there. But I've confirmed it with her.

4. Dues and Account. Need Anne's input to hear what they are, if we are in debt. If we need to be a part of the $700 billion buy out.

5. Magic Hat December meeting. Club (president) needs to contact Matt or Todd about doing it.
5b. October meeting is at Anne Whyte's.
5c. Nov. is at Dave Clark's.
5d. Jan & beyond will be decided in later meetings.... too far in advance for us.

6. Masher Challenge. Monk won. We need to know he wants to do for the next challenge.

Staff Box

The Barleycorn Press is a monthly publication of the Green Mountain Mashers Homebrew Club.
The Barleycorn Press appears in the final week of each month. **Contributions are due by the 25th of the month of publication or two Thursdays prior to the next meeting (which ever comes first).** Please send contributions via e-mail (preferable) or send on a CD-Rom (hard copy as a last resort) to:

Tim Cropley
11 High St., Waterbury, VT 05676
(802) 244-1683 (hm)
t_cropley@yahoo.com

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This publication is made available free of charge to all dues paying members of the Green Mountain Mashers. Subscriptions are available to all other interested parties at $7.00 yearly (US funds).

Note: The yearly dues of $20 should be paid by the end of January. Please mail your check or money order made out to the "Green Mountain Mashers" to Treasurer Anne Whyte at the following address:

Anne Whyte
10 School St.
Essex Jct., VT 05452
(802) 879-6462 (hm)
(802) 655-2070 (wk)
vtbrew@verizon.net

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Officers not listed above:
President - Todd Metcalf Ph # (802) 598-5057
"Todd Metcalf" <toddmetcalf@gmail.com>
Secretary - Ernie Kelley Ph # (802) 434-3674
"Kelley, Ernie" <epopmaf@gmavt.net> OR
"Kelley, Ernie" <ernie.kelley@state.vt.us>

Green Mountain Masher Calendar of Events

Date	Event	Information
10/6/2008	October Mtg at Anne and Matt Whyte's	Anne Whyte (h) 879-6462 (w) 655-2070 (email) vtbrew@together.net
10/25/2008	Cider Crush—Chapin Orchard, Essex	Vermont Homebrew Supply, (802) 655-2070
11/3/2008	Nov Mtg at Dave Clark's, Huntington	Dave Clark (h) 434-2060 (email) dbcchb@aol.com
12/1/2008	Annual Magic Hat Mtg (provided they can handle us).	Todd Metcalf - (h) 598-5057 (email) toddmetcalf@gmail.com

Please contact Tim at 244-1683 or t_cropley@yahoo.com to add items to the Masher Calendar

Brewing A Great Beer: DNA Study Reveals Evolution Of Beer Yeasts

ScienceDaily (Sep. 11, 2008)

Lager lovers convinced that their beer of choice stands alone should prepare to drink their words this Oktoberfest. New research by geneticists at the Stanford University School of Medicine indicates that the brew, which accounts for the majority of commercial beer production worldwide, owes its existence to an unlikely pairing between two species of yeast - one of which has been used for thousands of years to make ale.

The research offers a fascinating glimpse into the early history of beer brewing, as well as an unheralded sneak peek at the early days of the evolution of a new yeast species. Then, as now, brewers reused yeast in several successive fermentation batches, unconsciously selecting for the traits that made the most desirable beer.

"These long-ago brewers were practicing genetics without even knowing it," said geneticist Gavin Sherlock, PhD. "They've given us a very interesting opportunity to look at a relatively young, rapidly changing species, as well as some very good beer." The research will be published online Sept. 11 in Genome Research.

It all started with some unhappy Bavarians. Dissatisfied with the quality of beer brewed in the summer months, they forbade brewing the beverage when the weather was warm. However, colder winter temperatures inhibited fermentation by the ale yeast that had been used for hundreds of years and fostered an unlikely pairing with a second, heartier species-producing an unusual crisp, clear brew that became today's lager.

Sherlock, an assistant professor of genetics, and Barbara Dunn, PhD, a senior research associate at the medical school, studied the genetic sequences of 17 unique lager yeast strains from breweries in Europe and the United States. They used customized DNA microarrays capable of analyzing the relative contribution of each parent, combined with limited DNA sequencing, to determine that the hybridization event actually occurred not once, as previously speculated, but twice. This genetic encore suggests that each partner brought specific, unique advantages to the match.

"It's possible that the ale strain provides a certain flavor profile, while

the second strain conferred the ability to ferment at cooler temperatures," said Dunn. "Mixing them together is a nice way for the yeast to double its genetic options."

Traditionally, ales are fruity-flavored

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Cider Crush Details

(mostly reprinted from past newsletters)
by Anne Whyte

It's time for the crush again. The date will be Saturday, October 25th at Chapin Orchard. You can sign-up at the October meeting, sign-up sheet at the store, or you can call me at the store or email me with your order at vtbrew@together.net. The crush will be much like it has been in years past: Price will be the same as last year: $4.25/gallon. There is a Friday afternoon option for a limited amount. Saturday morning after 9:30 am is the time to be at the orchard.

You can call the store or sign up at the October meeting. I need to know ahead of time if you would like liquid yeast. Otherwise you can take your chances. I'll probably have some at the store to pick from.

If you plan to add campden tablets (potassium metabisulphite) you can have them crushed in the bottom. Bring extra dinero for cider donuts, apples and honey!

Directions:
From the intersection of Routes 15 and 128 in Essex Center, go north on Towers Road to Chapin Road (on the right). It's up this road on the left. The phone number at the orchard was 879-6210.

If you plan to use a liquid yeast please let me know by October 13th so we can have any liquid yeast you want. Yeast will be in on October 22nd. I order in advance of the crush. On the day of the crush I will have my usual assortment of liquid and dry yeasts. I don't like ordering dated yeasts speculatively since I usually end up throwing them away. Packages are the X-L size and don't need a starter for up to 6 gallons.

Just smack and let it puff. I have provided some specifics below about individual strains. I would encourage you to be creative with your choices.

Cider, when fortified to 12% alcohol with a neutral sugar, is similar to a white wine. Chablis yeast or the German white wine yeasts are really nice in cider. Port wine yeast makes a great New England style cider, i.e. done with darker sugars and oaked. There are liquid champagne and cider yeasts as well. Sweet and dry mead yeasts would seem well suited to honey/cider blends. Here is a brief synopsis of some potential cider yeasts:

#3021 Pasteur Champagne: 55-75F crisp & dry; good for higher alcohol ciders; low foaming.

#3028 Pasteur Red: 55-90F, ideal for red/white wines which mature rapidly with beaujolais type fruitiness.

#3237 Steinberg: 55-75F, one of the drier German wine yeasts, smokey character, good for a colder house.

#3242 Chablis: 55-75F, fruity profile, esters, bready vanilla notes, this one does tend to krausen up so be ready with a blow-off.

#3766 Cider: 60-75F.Creates a nice balance for all apple types, allows fruit character to dominate, used in the past by some mashers.

#3767: 60-90F, mild toast & vanilla note; mild fruit profile, dry finish, I have used this in a New England style cider to ood effect (I think).

#3787 Rudisheimer: 55-75F, Distinct Reisling character. Finishes with a bit of residual sugar. If you are trying to make a slightly sweet apple wine this is a good one to try.

#3632 Dry mead: 55-75F, low foaming with little/no sulfur production.

#3184 Sweet mead: 65-75F, leaves 2-3% residual sugar in most meads (potential alcohol should probably be over 13%), rich fruity profile.

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and likely to be cloudy. Although they may have a more complex flavor profile than lagers, they are best consumed at warmer temperatures and are less stable. In fact, the word "lager" is a derivative of a German word that means "storage."

Most yeast reproduce primarily by asexual budding - pinching off one identical daughter cell after first duplicating the parent's genetic material. Occasionally they go through sexual reproduction and form spores that can mate with another spore of the same species and then continue to bud asexually. The parental strains of the lager yeast chose yet another path. They looked outside their own kind, hybridizing (or fusing) to form a blend of both species better suited to the new, colder conditions.

The participants in this microscopic alliance were members of a larger genus known as Saccharomyces. One species in the group, Saccharomyces cerevisiae, commonly known as "bakers' yeast," has been used for thousands of years to make both bread and ale. S. cerevisiae grows best at temperatures between about 85 and 90 degrees Fahrenheit. The other, S. bayanus, grows best at about 70 to 75 degrees and can tolerate even colder temperatures. Together they formed a lineage known as S. pastorianus. Sherlock and Dunn compared the S. cerevisiae parent of pastorianus to a variety of strains, including those involved in fermenting wine and sake, before pegging it as an ale-specific strain.

"We were excited to find this connection, because it makes so much sense," said Sherlock. "The same breweries were used for both ale and lager, so it was really gratifying."

As often happens, the offspring of such an unconventional union exhibited abnormal amounts of genetic material. Sherlock and Dunn believe that one lineage began with approximately equal amounts of each yeast's genome, whereas the other has between two to three more times S. cerevisiae than S. bayanus DNA. Studying the spread of the two groups provides a genetic snapshot of lager brewing in Europe during the past 600 years: one lineage is associated primarily with Carlsberg breweries in Denmark and others in what is now Czechoslovakia, while the other group localizes to breweries in the Netherlands, including Heineken.

Furthermore, it's normal after such a hybridization event for the progeny to slowly lose excess DNA. Parsing out what has been lost and when in the relatively young hybrids is one way researchers can shed light on the process of evolution and the specific genes responsible for pleasing the palates of beer drinkers worldwide.

"When we look at the genes that have either been lost or amplified in copy number, we can make the case that some of them could be related to brewing," said Sherlock. Specifically, the researchers identified differences in genes involved in sugar metabolism and the clumping of the yeast after fermentation.

Why was beer so important in the Middle Ages?

"Beer, or ale, was the standard drink at the table," said Dunn. "Alcohol was considered healthy, in part because water at that time was often contaminated. And if you're drinking beer every day, you might want something that tasted pretty good."

The research was funded by the National Institutes of Health and the National Science Foundation.

Adapted from materials provided by Stanford University Medical Center

This Bug's For You

There's a new brewery in town, and its name is *Thermoanaerobacterium saccharolyticum*. Researchers have genetically engineered this rod-shaped bacterium to produce ethanol with unprecedented efficiency, they report online the week of 8 September in the *Proceedings of the National Academy of Sciences*. Unlike other bacteria, which create a variety of sugars when they chomp through a biomass such as switchgrass, *T. saccharolyticum* produces only ethanol. The improved efficiency could lower the cost of biofuel production, which could translate into spending less money on gas and more on other items--such as beer.

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edge of ales and lagers, but is far from a snob about it. She admits that Heineken is a decent beer, at least to take out on a boat, but her favorite is a little-known English beer called Bateman's Triple XB, a "grainy, gristy and gratifying" bitter, according to its Web site.

Far fewer women enter homebrew competitions than men, and even fewer come home winners. Whyte enters about three beer competitions a year and regularly takes home medals. Her pre-Prohibition ale called My Mother's Mustache took top honors at the 2008 Boston Homebrew Competition, and her light lager, The Chicks Were Right..., won first place at the 2007 Queen of Beer Homebrew Competition.

Whyte's beer names might be even more inventive than the actual beer. She makes a sour peach beer called Im-PEACH-ment Ale, an altbier called Worst.President.Ever and a beer called My Big Heine -- Whyte's take on a super-sized Heineken with a higher alcohol content.

Whyte's daughter, Katy, a senior at the University of Vermont, is following in her mother's footsteps. She has developed a nose for beer -- her mother's Irish red ale is her favorite-- and she's started brewing a bit herself.

Having a mother who brews great beer is not exactly a disadvantage when you're in college.

"I'd come home to do laundry and I'd always come back with a growler," Katy said.

Contact Lauren Ober at 660-1868 or:

lober@bfp.burlingtonfreepress.com

Barleycorn Press
Green Mountain Mashers
c/o Tim Cropley
11 High St.
Waterbury, Vermont 05676
U.S.A.

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