

The Basics of Mead Making
-or-
How SWEET it is....

It's a funny thing, but the thought of mead-making and brewing in general has brought nigh as many folks to the SCA as perhaps any other single art or science. Mead just feels medieval, and not just from a chance-found alliteration in the first syllables. Thoughts of quaffing a tankard of mead inevitably lead to the smoky mead-halls found in Beowulf and Valhalla, the Celtic Bards singing by firelight, and royalty at the high table plotting war over tankards and platters.

Interestingly, the Indo-European language root words for honey, mead (specifically), alcohol (in general), and drunkenness are all the same. This leads to speculation that mead is in fact the oldest fermented beverage. This is supported by the fact that honey is the first concentrated sugar source found by ancient man, and it's certainly much simpler than others to make. Yes, that's right. Mead is simple. But before we get to all that, let's get some more background.

From the WONDERFUL mead web site www.gotmead.com (Yes, bookmark it right away)

Mead by Any Other Name...

- * Aguamiel - Spanish mead
- * Balche - Mayan mind altering mead made with balche bark
- * Chouchen - Breton (France) mead
- * Hidromel - Portuguese mead
- * Hydromel - French mead
- * Idromele - Italian mead
- * Med - Bulgarian and Ukranian
- * Meddeglyn or myddyglyn - Welsh spiced mead
- * Mede - Dutch mead
- * Medovina - Czech and Slovak mead
- * Medovukha - Russian mead
- * Medu - Ancient? German mead
- * Medus - Lithuanian and/or Latvian honey
- * Meis - Eritrean mead
- * Meodu - Old English word for mead
- * Met - German mead
- * Midus - Lithuanian mead
- * Miód - Polish mead
- * Mjød - Danish and Norwegian mead
- * Mjöd - Swedish mead
- * Mõdu - Estonian honey beer
- * Nabidh - Arabic mead
- * Sima - Finnish mead
- * T'ej - Ethiopian mead (since about 400 B.C.)
- * Ydromeli - Greek mead
- * Madhu - in the Sanscrit Vedas
- * Nectar or Ambrosia - in the Greek and Roman mythologies these were thought to have been possibly referring to mead, as honey was considered a 'food of the gods'
- * Alu - Prussian for mead
- * Methe - Ancient Greek for mead

- * Mede - Frisian, and Low German
- * Metu or Mitu - Old High German
- * Meth - German
- * Melikatos - old Greek (morphed into hydromeli in present)

Honey Around the World

- * Ngarlu - Australian Aboriginal
- * Tapli - Georgian (in the Caucasus)
- * Mel - Welsh, Brazilian, (and others)
- * Hunaja - Finnish
- * Honig - German
- * Honning - Norwegian
- * Honung - Swedish
- * Mjod - Russian
- * Miel - Spanish
- * Hatchi Mitzu - Japan

See the similarities? Basically, no matter what your SCA period or country of choice, you'd know about mead. From my own research, I know that in Welsh royal courts, the position of mead-maker was a respected one, who would earn as part of his wages, food at the Court with his prince or king, 2 new suits of clothes a year, and lots of candle stubs. Countries that had prohibitions on drinking alcohol often excepted "wine of bees"-though that was mainly for medicinal purposes.

What is mead?

Basically, mead is the fermented product, via yeast, of honey and water. That's it. That's why I said mead was simple. But like most simple things, it takes a while to get it right, not to mention, humans being humans, we just can't leave things simple. Early meads were simply honey mixed with water, which would be left undisturbed for a while. Wild yeast, prevalent EVERYWHERE (especially in kitchens) would drift along, and find a fertile medium to do its thing in. Given a bit of time, some of the sugars are converted by the yeast into alcohol and carbon dioxide...and you have (technically) booze. In time, people learned to add things to this mixture (known technically as must), for more flavors, as well as how to cultivate specific yeast, while denying others access.

So now, again from gotmead.com, a list of mead-terms you'll want to learn (There won't be a test on this):

- * Mead - made with honey, water and yeast
- * Sack Mead - a sweeter Mead, with more honey
- * Melomel - with fruit or fruit juice
- * Metheglin - with spices and extracts
- * Acerglyn - with maple syrup
- * Morat - with mulberries
- * Pyment - with both honey and grapes
- * Hippocras - with honey, grapes, and spices
- * Cyser - honey and apples or apple cider (apple juice in Europe) Can also be made with peach, cherry or pear cider
- * Perry- honey and pear juice (like pear-cider)

- * Braggot - honey and malt, sort of a Mead-beer
- * Oxymel - Mead mixed with wine vinegar
- * Rhodomel - honey with Attar, a rose petal distillate, or rose petals
- * Capsicumel - honey with chile peppers
- * Omphacomel - Mead and Verjuice, the juice of unripe grapes
- * T'ej -with honey, water and hops. It is the national drink of Ethiopia, and has a unique taste

See, lots of specialized types of mead, but in the end, it's all honey and water and yeast.

Of course, this isn't good for historical re-creationists like us. Why? When it's simple, people didn't write it down! Fortunately, we've got good reconstructionists out there with spectrosopes and other high tech gear (see the section at the gotmead site) AND we have Sir Kenelm Digby. Who was he? Some Midrealm stickjock? No, he was a knight, born just before the end of our period, who wrote a lovely little book called The Closet of Sir Kenelm Digby, Opened. Okay, it WAS published just post-period, but since he borrowed recipes right and left from people he knew, and biology didn't suddenly change at midnight, New Year's Day, 1601, we can figure that these recipes WERE known and used in our period. Good news, they're in English and you can download them from the Project Gutenberg site (www.gutenberg.org). I even have the text file saved on my HD, and have a converted version on my handheld, for reference at events.

So, if mead is all very tasty, and not too hard to make, why don't you find it in grocery stores (actually, you can, but...). The easy answer is to ask the folks who made the Betamax. Basically, mead wasn't as outré as other drinks, grapes don't sting you when you make wine from them...and medieval people were lousy bee-keepers anyway. Basically, people went through the forests (of which there were many in medieval Europe), looking for hollow logs and trees with bees therein. They'd then stun or kill the bees with smoke, chop open the hive, and pull out the honey-combs. Not particularly good resource management, eh? Artificial hives came along later. But in period, honey-hunters routinely destroyed the sources of their honey. Over time, honey became more scarce, then along came this incredible addiction, stuff that was PURE sugar, shipped from overseas. Pure sugar was consumed by the ton-but that's a subject for a Tudor cooking class. Sugar was prestigious, honey was passe. And once the New World was opened, with sugar cane available and slave labor to harvest it...

Now, however, if you look in places that sell large quantities of alcohol, you can find a few brands of "honeywine", or mead. Our own Duke Sir Thorfinn Magnussen works in a commercial meadery. HoneyRun Honey Company, down in Chico, makes several varieties. Thing is, though, unless you make your own, you're at the mercy of what -they- think is good. And you know what? You can pay \$10+ a bottle for Chaucer's--or make your own for less than a buck a bottle-and make gallons at a time.

So, to the making:

Making mead, like any brewing, takes a little basic equipment to start, and you can upgrade and expand for years afterwards. You need a

container to ferment in (called a Carboy or fermenter, if it's meant to be air-tight, glass is your medium of choice), some water, yeast, honey, other flavorants (optional) and eventually, some bottles and tubing (for a siphon or a cheap airlock). Bleach is used to sterilize, and if you've got a sealable carboy, a stopper and airlock are necessary. So, let's go over everything piece by piece.

Carboy: Basically, what your must ferments in. If it's a gallon glass jug, you'll need to fit it with a stopper and an airlock to keep it from exploding while Oxygen is excluded. They also sell food-grade plastic buckets to do at least your primary fermentation in.

Siphon: Food-grade plastic tubing used to transfer the must or resulting mead from one place to another, without splashing or wasting anything, unless you're Thorstagge. Don't use this for stealing gasoline!

Bleach: I count this as hardware, since it's not something you want in your must. 1 Tbsp bleach per gallon of water exceeds USDA standards for a disinfecting solution. It's very cheap, compared to other disinfecting products. The only drawback is you have to rinse or let completely air-dry everything very carefully, because bleach kills yeast, too.

Funnel: Well, duh.

Airlock: A cheap little plastic gizmo to let excess CO2 out of your carboy, without letting Oxygen back in. Costs less than 2 bucks at any brew store. You can also rig up one with some tubing, a bowl of water, and some luck.

Notebook: Essential equipment? Yes. You'll want to write down the details of each batch you brew, even listing the brand of yeast and other trivialities, or you won't be able to recreate it--or figure out where you went wrong.

Water: almost as simple as it sounds. But if you don't like the water in your tap, don't use it to brew. If it has chlorine in it, make sure you boil it or at least heat it well before brewing with it.

Yeast: Yes, you can use bread yeast. But it won't taste as good as other ones. And using wild yeast from the air is a crapshoot, since some of them out there just aren't good for you. One of the best choices is champagne yeast, as it's very fast, has exceptionally high alcohol tolerance, and is more than strong enough to push most other yeast colonies out of existence. Other yeasts can impart different flavors (ale, beers, wines, and so forth).

Other flavorings: You can add just about anything to your must to enhance or change the flavor. Berries and citrus work well (raising the pH balance is often a good thing), herbs and spices can be wonderful...just be careful. Too much of a good thing often makes for unpalatable mead

Honey: The stuff of which dreams and drunkenness are made. Avoid "blended" honey, which means you have no idea what all is in it. The

more natural it is, the better, and the less processed it is, the more you'll have flavorings. I personally favor very dark honeys (Means there's more sugar in it) or orange blossom honey. "Wildflower" honey just means they don't know what the bees were into when they harvested it. Rhododendron honey is definitely something to avoid...in small amounts, it causes hallucinations. In larger amounts, it will kill you. (Greeks used it for their oracles, believe it or not).

So, how do you make it?

In an ideal world, you'd add honey to water, toss in your flavorings and yeast, and let it go. On a practical level, it's a bit more complex.

First, clean EVERYTHING. I don't care if you just did it yesterday, soak all your equipment in a bleach/water solution again (1 tbsp. bleach per gallon water) and either let it air dry, or rinse it carefully before drying with a sterile cloth. Wash your hands, the countertops, keep your hair back, everything. This is going to take a while, so see why this is better done as a social activity?

Then heat up some water. Here's where you get your first choice. Most honey isn't pasteurized (and you should avoid the stuff that is, because all the flavors have likely been boiled off). To be safe, you need to heat the honey with some of the water. Below, find a chart that gives temperatures and times needed to pasteurize your undiluted must. Note that the lower the temperature, the fewer tasty volatiles you're going to lose, but it will take longer, and you run the risk of burning things, either way you go.

Temperature (°F/°C)

Time (minutes)

123/51

470

130/55

170

135/57

60

140/60

22

145/63

7.5

150/66

2.8**

155/68

1.0**

As you heat it, "scum" will rise to the surface. Skim it off. The instructions from the Knowne Worlde Handbook will have you remove the scum until it stops coming up (and boiling your must at a full on boil, too). Granted, this will remove ALL the impurities, and give you a rather clear mead as a result. You're also making sure that fermentation by-products that lead to unpleasant headaches also are gone...and also making sure that all those lovely subtle honey flavorings are gone too. Digby has you boil the mead too, so we know it's historically accurate to

do so, but given the fuel consumption involved, I rather doubt they did bring it to more than a goodly simmer.

Once pasteurized, add the rest of your water to make the full amount you're brewing, making sure to splash it well, to get lots of dissolved oxygen into play. Yeast needs oxygen to start, but after that, it's anaerobic, meaning it works best with no additional oxygen. While your must cools down to a nice 80-90 degrees, take a bit of your must (or just some water and a bit of honey), and add your yeast to that, stirring a bit. Let it sit someplace warm, until it starts to bubble. This is proofing the yeast. Once your must reaches 90 or so degrees, pitch your yeast in the must, add whatever additional flavorings you want, and cover the fermenter (or seal the airlock). Cover your fermenter so it doesn't get light, and put it someplace cool. Check it in a couple of days, you should definitely see it bubbling. After about two months, you can either rack it into a secondary fermenter (making clearer mead), or rack it straight into serving bottles. Either way, try if you can to give it another couple of months to age. Drink when it's cool.

So that's the basics. Below, find the "Old 3 Celts" recipe that Lord Kemnon of the Mountains and I worked out. It's pretty reliable, and makes yummy mead.

For 5 gallons of mead:

18-25 pounds (depending on how sweet you like it) honey
1 packet champagne yeast
1 orange (juice and zest)
1 lemon (juice and zest)
1 piece of ginger as big as your thumb, peeled, minced.
Small piece of cheesecloth and string.
Water to make a total of 5 gallons.

Dissolve the honey in 2 gallons of water. Heat to a low boil, skimming off the scary looking sum that forms. Let cool, then pour splashily into the fermenter. Pour in remaining three gallons of water, and start yeast in warm water plus 1 tbsp. honey. When must reaches 90 degrees, stir in citrus juices and yeast, and add zest and ginger in a small bag made from cheesecloth and the string. Hang the bag inside the must, and seal fermenter. Check after two days to make sure fermentation is going. After two months, when bubbles have slowed to one every 30 seconds or so, rack to second fermenter and remove flavorings bag (This is why you bagged it-easier to remove). Allow to continue for 2 additional months. Bottle. Drink.

But don't just use our recipe, make your own. We live in an agricultural area where we can get just about anything, produce-wise. Enjoy it! Heck, REVEL in it!

Oh, yes, and one further note. Get involved with the West Kingdom Brewers' Guild. They've got LOADS of experience, and are wonderful folks. At last Coronet, the "meeting" they held was nothing but a taste testing, for all of us that showed up, of several ales, beers, lagers, LOTS of meads, a few ciders, and a cordial or two. What a great way to

spend several afternoon hours. Learn from what other people have done, or didn't, and get some excellent commentary on your own work.

Gwyn Chwith ap Llyr