

# The Middlesex ee

*The Middlesex Bee is the official newsletter of the Middlesex Beekeepers Association, Inc., a 501(c)3 non-profit organization*

“Our treasure lies in the beehive of our knowledge. We are perpetually on the way thither, being by nature winged insects and honey gatherers of the mind.”

Friedrich Nietzsche

## October 28, 2016 MCBA Indoor Meeting and Bee Talk

Tom Fiore welcomed everyone to our first indoor meeting of the 2016-2017 Fall/Winter Season, and then announced that “We have some special guests joining us this evening: 2 teams with the Animal Allies Program (from Littleton, and from Nashua). As is tradition, Tom asked those joining us for the first time to introduce themselves:

- Joanna and family, from Westford. She learned the basics of beekeeping from Club Treasurer/Librarian Allen Bondeson 5-years ago, and this year we finally got honey. They wanted to come and learn as a family.

- Kathleen also from Westford, she's been talked into taking care of her kid's hive – they caught a swarm.
- Mary Ellen and Michael from Chelmsford, are first year beekeepers with 1-hive, they took Rick's class.

## Presentation by Animal Allies

A team of students joined together to create technology to perform a task/mission. The focus is to learn respect and to act like a team, and find a problem to conquer. The overall theme this year is human-animal interaction.

The first team worked on a smartphone application for Android phones. They said that they believe that most beekeepers take

November 2016

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*Minutes*

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*A fun thing to do with your honey*

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It's that time of year again... please **RENEW YOUR MEMBERSHIP** (page 14)

## Save The Date

### MCBA Indoor Meetings and Bee Talks, Special Events

*First Religious Society Hall, 27 School Street, Carlisle, MA*

11/25, 7-9pm, Dan Conlon, Russian Bees

12/10, *Saturday*, 6:30-9pm, Holiday Dinner

01/27, 7-9pm, Dr. Elizabeth Farnsworth (NEWFS), Plant Physiology

02/24, 7-9pm, Kim Skyrn, Bumblebees & Mass. Apiary Program

03/24, 7-9pm, Topic/Speaker: TBD

04/28, 7-9pm, Annual Meeting, Spaghetti Dinner, Topic/Speaker: TBD

05/06, 9am-2pm, MCBA/MVBA Spring Workshop

### MCBA Bee Schools

01/24, 7-**Tuesdays**, 7-9pm, Newton Community Education

Newton North H.S., 457 Walnut Street, **Newton**, MA, 02460

<http://www2.newtoncommunityed.org/>

01/28 (*tentative*), 5-**Saturdays**, 9:30-11:30am, Acton-Boxboro Comm. Ed.

A-B High School 16 Charter Rd., **Acton**, MA, 01720, RM. 184W

<http://abce.abschools.org/>

02/12, 5-**Sundays**, 5-7pm, Tyngsborough Recreation Center

120 Westford Rd., **Tyngsborough**, MA, 01879

<https://unipaygold.unibank.com/Transactioninfo.aspx?transid=8699>

### Massachusetts Beekeeping Association Meetings: ([www.massbee.org](http://www.massbee.org))

03/18, 8am-3pm, Spring Meeting

*Topsfield Fairgrounds, Topsfield, MA.*

06/24, 9am, Field Day

*UMass Agronomy Farm, South Deerfield, MA*

notes like they're telling a story versus using the scientific method. Notes (data) taken in this way can't be directly compared, and they have proposed a solution – an app that beekeepers can use to record information (inspection temperature, weather conditions, bee count, pests, queen quality, etc.) and this data can be sent to a central location to create a database for review. The next page of the app would deal with stores (pollen and honey amounts). The third page deals with pest control (Varroa count, and SHB presence). Queen observations follow (did you see the queen, the queen's health, and other information like this). The final page of the app is focused on feeding, more during the wintertime. Possible future additions would include notes for follow up, and a notification system/alarm to remind the beekeeper to check the beehive.

MCBA members made a number of suggestions, mentioning that it is a very ambitious project and that perhaps it would be good to focus on one part and be able to expand over time. There are other apps like this, and the team could learn from them on what works and what doesn't. Another member mentioned that this app could be incredibly useful to the State's Apiary Inspection Program.

The second group, from the Academy for Science and Design introduced themselves and stated that they are in the initial planning stages, and were here to learn more about beekeepers, beekeeping, pesticides, and about Colony Collapse Disorder (CCD). ■

## Bee Talk

Tom congratulated our swarm coordinator, Alix Bartsch on becoming **an Eastern Apicultural Society certified Master Beekeeper**. To be certified, one must pass 4-difficult tests (Written, Oral, Lab, Field) which are given over the course of two days. Alix passed them all, on her first try – which is a rare feat. Alix said that these days “It’s extremely difficult to keep bees alive these days, and she wanted to learn more so the testing provides a good route.” Alix shared that it was a difficult exam, and that she is not only putting together a library of old exams, but is willing to help anyone who wants to take EAS Master Beekeeper exam. Alix said that we need more master beekeepers in the state, as currently there are only two (Mary Duane in Worcester County is the other). If you’ve been a beekeeper for a while, or plan to be in beekeeping for a long time, Alix said that you should consider taking the test.

While we have the swarm coordinator handy, **how many swarms were there this year versus in the past?** Alix said that we had many swarms in the spring because it was a mild winter, but the number of swarm calls decreased steadily thereafter because of the drought. Alix said that we had a number of colonies abscond in August, but that’s a different situation. Swarming is the natural way that honeybee colonies reproduce: half the hive leaves with the queen, leaving behind the comb, stores, half the colony along with queen cells / a virgin queen. **A colony that absconds does so out of desperation**, the entire colony leaves in a titanic wave in hopes of finding a new home and food source. Alix said that in August we had a lot of bees abscond, because they ran out of stores (issues due to the drought). Sometimes hives will abscond in the winter, but whenever they do abscond, they don’t linger they’ll just go.

Birgit said that one of her hives absconded – it was heavy and beautiful, but now they’re just gone. The last time she went in to look, there were lots of bees – but they’ve just... left. A few other members said that their hives absconded under weird circumstances, often leaving behind a good deal of stores. **Rick Reault said that there are a lot of variables which could play into this**, and the more specific info that you can supply on the status of your hives (When was the last time that you did mite treatments?

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Did you test to determine the mite level? And when? How many frames of brood were in the hive?) can help us decipher what happened. Rick said that hives will abscond for a number of different reasons, because of Small Hive Beetle, Varroa, lack of food... Birgit said that she did an inspection on September First, and at that time there were 3 frames of brood (with a healthy pattern), 20 frames of bees, 6 frames of honey and 2 of pollen, and that there was no [visible] reason for it to happen. Rick said that another possible cause for a hive to abscond is pesticides; **Not every pesticide poisoning will produce a large kill in front of the hive,** it's presence could force them to fly off...

Unfortunately there are many causes out there.

A member offered that 'Birders' are famous listers, creating large data lists, and the app mentioned earlier on a handy device for tracking your own hives with a central data dump would be beneficial. With a corps of "Citizen Scientists" any error would eventually get weeded out over the years. He asked **is there**

## Like Us on Facebook

Our Facebook Page has updates about meetings (delays/cancellations in Winter), and articles about bees - so the next time you're online, come visit!

**a centralized data point?** The club does not, and officers were unsure whether the state does – the Massachusetts Department of Agriculture may do a hive census again next year. The Mass. Chief Apiarist is supposed to produce a report each year, but this is Dr. Skyrms's first year. There is a national census conducted by the Bee-Informed Partnership. A member said that we would need to have a standardized form, a way to count the bees as well as to collect other data. How many frames are totally covered in bees? When you do an inspection, you could share that information. A member asked if there was any way to get the app on our website? We can post it if/when it becomes available.

**How many members have experienced their new colonies not doing well?** The member had purchased two nucleus colonies in late springtime and felt that she was getting the leftover comb and other problems from the beekeeper she purchased from. She said that neither nuc progressed as they should have, and she has maybe 4-5 frames of bees (total) in both hives, she's feeding them syrup, and she's sure that they won't make through the winter. If they do survive, how much pesticide is there in the old comb? Rick said that **every new member should consider going to our outdoor workshop in May.** He said that the most important thing you can have when starting out with bees, is to have the ability to go into your hive(s) and make a determination of how the bees are doing. If they're not doing well, you need to take action right away. This assessment

## Bee Magazine Discount

MCBA members receive a 25% discount off subscriptions to *American Bee Journal*.

For a copy of the ABJ Association Member Subscription form, visit the *Club Business & Important Links* section of the MCBA members-only website:

[membership.middlesexbeekeepers.org](http://membership.middlesexbeekeepers.org)

is constant throughout the season, and it is what we beekeepers do. If there is something wrong, we try to fix it. If that doesn't work you try again, and if that doesn't work you try again. Rick said that there is always something wrong, and if you have 3 hives then there is bound to be something wrong with at least one of them.

**Determining what's wrong, and fixing it - learning what problems are and trying to fix them – that's beekeeping.**

Alix said that she believes that nucs are the best way to start new hives. Though they may cost more, if you get them from a reputable supplier then you will be in a much better position. Rick said that even with nucs, you need to go in regularly and make assessments. Once you install a nuc, you should go in the

next week and see what's going on. Is the queen still laying? Are the bees expanding onto new frames? Is there brood in all stages of development? If so, then Rick suggested at that point you should add a box, otherwise that nuc is going to swarm. Rick emphasized that the workshop will help you, because you'll see what a good pattern looks like, and have a reference for what you want to see going on with your hive(s). He said that it helps to know the seasons here locally in New England Season, and have a feel for the weather. Know how to keep watch on your bees, because **what you're doing today (late October/early November) isn't going to determine whether your hive successfully overwinters or not, it's what you did in July and August.**

Tom said he wanted to go back to something the member mentioned in her question – that she was feeding her bees. He said that if you need to feed **at this point, you SHOULD NOT be feeding syrup** – that only serves to introduce moisture into your hives, and the bees probably aren't taking much of the syrup given the weather. If you need to feed, Tom suggested feeding Fondant. Rick Said, that honeybees are like us. If we're sick and we eat something, it's not a cure. You need healthy bees, and to get bees healthy you need to manage them throughout the summer. Healthy bees get through the winter.

Bernie asked members **how their honey crop was this year?** Rick shared that his hives' production was approximately 85% (through the middle of July) from past years – but he was unsure because he had more hives this year than last, and couldn't do a direct comparison. As an example, he said in a typical year he could move half the hives out of an apiary location and still result in the same amount of honey production from that location. How many hives do you place in each location? Rick said that he will have 6-10 hives, but due to splits and management that number could go up to 12.

**When should we put on fondant? Should the hive always have something on there besides honey?** You need to determine each hive's needs individually. Rick said that a hive needs to have at least 50-pounds of honey, but each hive will consume its stores at different rates, depending upon cluster size, and when the queen starts laying. Rick

suggested lifting the back of the hive with one hand. If it only takes 2-3 fingers to lift then the bees are very light on stores. You could add a few frames of honey, or fondant. But, if the hive is heavy then you don't need to add anything. During the winter you should be going out and testing your hives every month. You need to make sure they have stores through the winter into springtime, because that is when they will really start going through the stores and eating because they'll be raising brood.

#### **How do you determine if there are too many hives in a neighborhood?**

Tom said that he very much doubts that that would be the case around here, and to not worry about over-saturation. Rick said that you need to keep bees for 3-years in the same spot to make that determination. Given weather fluctuations (like the drought this year) it helps to have some basis to make a decision. Rick said that if after 3-years a location hasn't produced honey, then that area is not very good – he mentioned a site in Acton where his bees produced a lot of honey the first year they were there, and then zero the next 3. It turns out that they started growing corn and pumpkins there and using Roundup to kill weeds, and were spraying their crops in the middle of the day. As a result, Rick decided to move bees. Sometimes, he said, that it takes 3 years to determine whether a location is okay, or a bust. Tom reiterated his point that unless your apiary property abuts a commercial area, farm, or a migratory beekeeping operation (and that doesn't happen often around here) then the chance oversaturation of beehives is low. It's more important that the surrounding area have available forage rather than the total number of colonies. ■

## **Business Meeting**

### **Treasurer's Report**

Al Bondeson presented the Treasurer's Report. A copy can be found on the member's website. **Why did Rapsallion brewery give the club \$1,000?** Tom said that one of our members works for the Rapsallion Brew Pub in Acton, and the owners approached to see if they would be willing to speak at a Dinner based on honey (honey themed food and drinks). Tom Fiore was the featured speaker at the four course dinner which paired

Rapsallion's food with different beers that they produce. Tom got up and spoke about bees, beekeeping, and the club between courses and basically they sent us a check for \$1,000 after they paying for their expenses. Tom said that hopefully they'll do it again, and hopes other opportunities for fundraising and community outreach happen as well. The officers and directors are discussing how best to use the money, and we're exploring various options.

### Meetings and Events

The Massachusetts State Beekeeper's Association (MassBee.org) will be having it's Fall meeting at the Knights of Columbus in Pembroke on Saturday November 12th. You can visit MassBee.org or our internal members-only website for more information. Tom said that there will be a Honey show, and there may or may not be a baking contest as well.

At last Gandalf pushed away his plate and jug – he had eaten two whole loaves (with masses of butter and honey and clotted cream) and drunk at least a quart of mead – and he took out his pipe...

J.R.R. Tolkien

Our traditional FAT (Friday After Thanksgiving) meeting will take place on November 25th. Dan Conlon (*of Warm Colors Apiaries in Deerfield*) will be speaking about Russian Bees and keeping of them. Dan is a certified queen raiser of this interesting breed, join us and learn more about them!

Saturday December 10th is our annual holiday party. If you've ever thought about getting more involved in club activities, this is a wonderful opportunity to do so - we need volunteers to help. If you're interested in lending a hand, please contact Tom Fiore at president@middlesexbeekeepers.org

### Laws and Regulations

Tom Fiore spoke briefly about the state's new apiary regulations. The Massachusetts Department of Agricultural Resources (MDAR) promulgated a draft of potential regulations and the officers submitted comments – responding that many of the proposed regulations are confusing and/or unenforceable. Going forward, Tom expects tweaks, but is unsure whether MDAR will make a public response to comments received. Technically, they don't have to - but other clubs and individuals reviewed the proposed regulations and offered suggestions on how they could be improved. A member asked if there was a timetable and Tom said that he was unsure, and that MDAR doesn't know at this point either.

Alix Bartsch has been our unofficial legislative liaison, and she spoke briefly about the proposed

## Cleaning your tools and Smoker

This time of year, my tools are covered with wax and propolis - but no need to worry!

All you need is boiling water, a piece of steel wool, a pair of tongs, a disposable aluminum pie plate, some oil, and a plumber's torch.

Boil some water, fill the pie plate and soak your tool(s) for a minute or two. CAUTION, your hive tools will now be **HOT**, so use the tongs to pick up the tools up out of the hot water. The sticky mess on your tools will easily wipe off with the steel wool. I finish by oiling my tools with coconut oil.

Depending on usage and fuel source, the inside of your smoker may be coated with a layer of creosote, which you can remove easily by burning it off with a plumber's torch.

Board of Health beekeeping regulations in Cambridge. Alix said she wasn't sure whether one should laugh or cry about the proposals; for example, your smoker would have to comply with Department of Environmental Protection laws. If you live in Cambridge, or would like to help or become involved, please contact Alix.

She said the Cambridge BOH regulations are absolutely unique, having determined that honey bees somehow present a human health risk. Other highlights include the requirement that you have year-round mouse guards on your hives, and that you have a continuous source of fresh water for your bees. In addition, in order to keep bees, you would need to submit an application package with scale-drawings and signed sworn statements informing your neighbors, and have a contingency plan if you die. They seem to be concerned about vectors and sanitary conditions, but the whole thing is absolutely horrendous. We're going to submit our comments very soon. Alix said that Cambridge seems to be heading in the direction of New Bedford, which has just banned beekeeping outright. Unfortunately not to be outdone, the Cambridge Zoning Board is also doing a set of regulations...

Alix briefly mentioned the fact that the Massachusetts Attorney General, Maura Healey, recently issued something banning Bayer Crop Science neonicotinoid products which claim to be "Bee Safe." This announcement just came out in the past week, and as we have more information we will share it with members. ■

## Extractor



MCBA maintains a hand-operated Maxant 3100-series 9-Frame Honey Extractor for rent by current members. Rental includes everything you need to extract your honey, including:

- Electric hot knife for uncapping honey frames
- Uncapping Fork
- Uncapping Tank

### Terms:

- This extractor is available on a first-come, first-served basis to members only.
- The extractor is easy to transport in an SUV or Pickup, and is capable of being moved by one person with ease (however 2 people are helpful)
- \$15/day. Extensions may be available depending upon scheduling. Contact the Extractor Coordinator at [extractor@middlesexbeekeepers.org](mailto:extractor@middlesexbeekeepers.org) for information.
- The Extractor must be cleaned WITH COLD WATER before returning to the club.
- Any and all damage and/or maintenance issues MUST be reported to the Extractor coordinator immediately.

**To reserve, contact Kathy at: [extractor@middlesexbeekeepers.org](mailto:extractor@middlesexbeekeepers.org)  
or by phone at: 617.549.7460**

### Rick Reault on making Mead

This is something fun you can do with your honey. Rick said that his initial introduction to making mead was in his second year of beekeeping, and his first batch was pretty awful – you couldn't drink it! However, Rick spoke with longtime members Al Horton and Carl Flowers (Carl hosts our outdoor workshop), and they're pretty good at making mead. After getting some advice, Rick's next batch was actually drinkable. Mike Mintz invited Rick to speak to about 2nd, 3rd 4th year beekeeping, and at the meeting Mike offered some of his mead for tasting. It was wonderful, so Rick said "Mike, you need to show me how to do that!" John Cheetham came over along with a few others and we made a batch using Mike's Recipe.

That was 5-years ago and Rick has been tinkering with the recipe, trying something different every year. The last 3 years at the Topsfield Fair, Rick's meads have taken first place overall in the mead category. The mead is part of the "Cooking Division" at Topsfield, and the Fair Organizers take the judging very seriously, bringing in nationally recognized judges, professional food tasters that do this for a living (they're employees of Arthur D. Little) for their competitions. So amongst the honey cakes, honey pies, foods and drinks made with honey, Rick's mead took second place last year, and first place overall in the entire cooking division this year!

Rick said that he's biased, and that he wants his mead to taste a certain way and it was gratifying that professional food tasters agreed that yes, it does indeed taste good. Rick said that he enjoyed the presentation by Moonlight Meadery at our April meeting, and that he would like to have small Meadery as part of his beekeeping business.

### Types of Mead

Traditional Mead is plain honey, water, and a yeast that produces an alcoholic beverage. It is available as sweet, semi-sweet, dry, or sparkling, depending on how you make it.

- If you add fruit to the mead it becomes a Melomel
- If you add grapes however, the mead becomes a Pyment
- If you use apple cider in place of the water, you have a Cyser.
- If you use maple syrup in place of water, you have an Acerglyn
- If you add malt to the mead it becomes a Bragget
- If you add spices to the mead it is now a Methegin
- If you carmelize or burn the honey, the mead becomes a Bochet

The following **attributes of mead** are determined by how you make it:

- Sweetness (a mead comes in sweet, semi-sweet, or dry varieties)
- Carbonation (meads can be sparkling if you so choose)
- Strength (Alcohol Content) – Use a Hydrometer to measure the specific gravity when you first mix up the batch – the strength is determined by how much honey you put in, and the yeast you choose to use.

### Ingredients

*(Rick's recipe, how he has improved it, and how it is different from commercial meaderies)*

- Water
- Honey
- Yeast
- Yeast Nutrient and Yeast Energizers
- Acid and Tannins
- Oxygen

### Water.

Don't use chlorinated water, you want water that is not high in minerals, so use a good well water, filtered water, distilled water, or even bottled water. It's common sense that if your water tastes good, it will make a good mead.



## Honey.

Not surprisingly, it's a very important part of mead making – but you have to be careful of the type of honey you use! A simple light honey with not a lot of body will not make a good mead... the more flavorful honey you can find will make a more flavorful mead.

Rick's mead that scored a 100 and took first place was the result of an idea he had a couple of years ago – he wondered if Red Bamboo (Knotweed) Honey would make a good mead. Most mead makers, Rick said, are not beekeepers and they will buy honey wherever they can. However since Rick has his own bees, he's familiar with the different varieties they produce. Red Bamboo is Rick's favorite honey; Red Bamboo nectar yields a real complex honey with a smoothness and richness to it. It's very easy to find in your frames because it's nearly black or really dark in your frames that appears late in the year, and it will have a red tint to it.

**I see you have a 3-gallon carboy there, do you use those?** Rick said that he experiments with smaller batches in 6-gallon and 5-gallon carboys first before scaling up to the 50-gallon oak bourbon barrels. He brought in a 3-gallon glass carboy because it's lighter! Rick said that he likes starting small batches in the 6-gallon glass carboy, because when he does the first racking he ends up with 5-gallons, which fits the 5-gallon glass carboy perfectly. **How much honey do you use?** For large batches in the 50-gallon oak bourbon barrels, Rick will use 180-pounds

of honey (more than 15-gallons of honey!) so not quite 2:1. The more honey you use, the more body the final product will have. Rick prefers to compare his meads to Ports or Sherrys. Time becomes an issue, because the more honey you add, the longer the mead needs to ferment and age. Rick's award winning mead was bottled 2-years ago. Commercial mead makers are going to use less honey because honey is expensive and they want to get their mead to market in 3-4 months (they're also not going to pick 'varietal' honeys' unless they're easy to purchase regularly). In the Baltic region, they may use a 1:2 (honey to water ratio) to make their meads, and those will need 1-year to 2 years to be ready. Polish meads may be 1:1 (honey to water), and those will take about 5-years to be ready. Some will use a 2:1 ratio and those meads will need 10-15 years to make. **Does it take that long to ferment, or to age?** Both. A gradual/slow fermentation ramp up is better for the mead because producing alcohol faster ends fermentation. **Do you filter or heat your honey?** Rick doesn't heat the honey or water to sterilize as most meaderies do, as that takes away from the flavor. American meaderies will also skim the top of the mead when racking to remove the top layer – those are pollen grains from raw honey. Removing that helps clarify the mead really quickly. **How long does it take for your meads to clarify?** It takes a long time, but it ultimately depends on how many pollen grains are in the honey you use. In addition, the color

of the honey you use will determine the color of the mead. Rick mentioned a battle he had with a writer from Bee Culture about a year back – Rick sent in some of his Knotweed honey for analysis. The writer responded that there was everything in the honey but knotweed, and that it wasn't the first time beekeepers didn't know what was in their own honey. Rick said that the pictures of the researcher in a bright white, unsoiled suit indicated that the researcher probably didn't have much field experience, and that Rick knew that his bees were working Knotweed. It turned out that Rick was right! The researcher was analyzing Rick's honey by looking at the pollen grains in the honey... and a University of Montana study that Rick found shows that Knotweed has very little pollen because it propagates itself through its root system. The Knotweed honey that Rick doesn't have many pollen grains, so it clarifies quickly.

## Yeast.

Rick uses White Lab's Sweet Mead Yeast, but finding a good yeast is a trial and error process because there are a lot of variables (including what honey you're using, how much honey and the type of yeast). Rick admitted not having much luck with a champagne yeast that he tried, but has been successful with the powdered Lavin D47. The White Lab's yeast that Rick uses comes in liquid form. **What about alcohol content?** That's determined by

the yeast you use, and how long it survives in the must during fermentation. A yeast that lives longer will produce a higher proof mead. Information about this can be found on the yeast's package label.

### **Yeast Nutrient and Yeast Energizers.**

For the yeast to have strong fermentation, you need to add yeast nutrients and energizers – Rick said that they're very important. He'll use 8-10 packages in a 50 gallon batch, and 1 or 2 for 5 or 6 gallon batch of mead.

### **Acid and Tanins.**

Rick juices 60-75 lemons for 50-gallon batch of mead, and that ratio holds for 5 gallon batch (divide by 10). The juice adds citric acid, and the mead must loves acidity... water and honey alone won't produce a good mead. Rick also provides Tannins to the must by zesting the lemons and giving them the lemon peel.

### **Oxygen.**

The final ingredient is oxygen. Brewing mead is not like beer and wine, and you have some flexibility with the air lock after adding the yeast in. You can use a wet rag or dry coffee filter to let the must suck some air through. Others will use a stirrer when adding the yeast nutrient to get some air in there.

Those are the basic ingredients, now the question is “**What do you want to make?**” A sweet, semi-sweet, or dry mead? There is a formula for this on the internet. After 3-4-5 months you'll use a formula with the the two (new and original) specific gravity measurements to determine the alcohol content and sweetness level. It's a trial and error process, and the correct path is to not produce any off flavors so that the mead is pleasant to you palate.

[As the mead is fermenting and aging,] **how often do you taste it to see that it is going the right way?** Rick admitted that he's gotten a lot of practice tasting meads – but the 3 month mark is a good indicator. If your mead tastes good at 3-months, you're doing pretty good and it is only going to get better. If your mead needs something you can back sweeten it and try to massage the flavors... however, if your mead doesn't taste good it probably is never going to taste good. **Will it taste different if you make the mead in glass carboys versus the oak [bourbon] barrels you use?** Yes.

"Rick also mentioned that when making melomels (meads brewed with fruit) that you need to start off with a good mead, if it doesn't taste good you shouldn't waste your money buying fruit. When he finds something he likes, he'll rack it off onto frozen blueberries, frozen cherries, or some other fruit and let the mead marinate in the fruit. As an aside, Rick said that you don't need to sterilize frozen fruit. Do you need to add more yeast when you add the fruit? No, the remaining yeast will produce

a secondary fermentation with the sugars in the fruit. However, Rick did share that meads lose their sweetness and come out drier when making melomels. That may be due to the water content of the fruit, but whether it is or not, Rick has found that losing sweetness holds true whenever he's tried it. So much so that once when making some Elderberry Mead it came out too strong of Elderberry. He racked a third of it off onto sweet mead and that mellowed the flavor as well as took some of the sweetness off.

**Do you use Camden tablets?** Rick said that he will only use them to sterilize the vessel, and when he does he waits before pitching the yeast into the container because they will kill the yeast very quickly.

**Are you marketing your meads?** Not yet. Rick said that he will be applying for a license but commercial licenses require producers to have a separate building and he's in the process of building a new facility for his beekeeping business, and he plans on dedicating a portion of the business to making meads. ■

## Holiday Dinner

12/10 (Saturday), 6:30 pm-9:00 pm, First Religious Society Hall, 27 School Street, Carlisle, MA.

The club will provide the main course of **turkey, stuffing and gravy...** we are asking members to help with the rest.

If your last name begins with: Please bring:

**A-G Bread**

**H-N Salad**

**O-T Side dish, or Soft drinks**

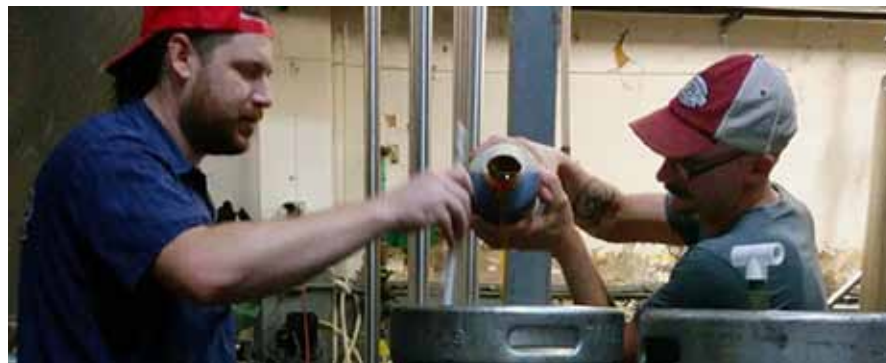
**U-Z Dessert**

**RSVP** by 12/3 online on the member's website, or by email to Tom Fiore: [president@middlesexbeekeepers.org](mailto:president@middlesexbeekeepers.org) if you plan to attend.

An optional donation of \$5/person to help defray costs would be appreciated.

**Finally, please remember to bring your own plates, silverware, glasses and/or cups!**

## Ancient Mead



**Scientists have recreated an ancient mead from 2,500 years ago**  
Peter Dockrill, 25 OCT 2016, *Science Alert*

There's aged wine and then there's aged wine, and an alcoholic beverage based on an analysis of cauldron sediment dating back some 2,500 years is most definitely the latter.

Researchers in Milwaukee have teamed up with a local craft brewer to recreate this ancient tippie – but before you get too excited about sampling a booze relic hailing from the Iron Age, be warned: it might not be quite suited to modern tastes.

The project is the brainchild of archaeologist and anthropologist Bettina Arnold from the University of Wisconsin-Milwaukee, who uncovered the cauldron in a burial plot back in 2000, during a dig in an area of southwest Germany known as Swabia.

The burial mound, called a tumulus, was built sometime between the 7th and 5th centuries BC. The skeleton inside must have disappeared long ago due to the levels of acid in the soil, but the team suggests he was most probably a male, based on the weapons buried with him: an iron slashing sword, a helmet, and two long iron spears.

*Continued next page...*

But the real prize lay at his feet – a large bronze cauldron, once full of mead. One for the road, so to speak.

"The dead man in Tumulus 17 Grave 6 had been sent into the afterlife not only with his weapons but with about 14 litres of an alcoholic beverage that he could have used to establish himself as an important person in the next world as he had been in this one," Arnold explains on her ancient brew blog.

While this heady brew itself was missing by the time Arnold's team discovered the cauldron – either due to natural processes of evaporation, or perhaps proving popular in its afterlife destination – the researchers carefully excavated the find to see if later analysis in the lab might reveal the drink it once contained.

Investigating a dark residue on the bottom of the vessel, "[w]e actually were able, ultimately, to derive at least some sense of what the contents were in [the] bronze cauldron," Arnold told Bonnie North at NPR.

The team found evidence of a honey-based alcoholic beverage, with traces of two herbs added for flavour: meadowsweet and mint.

The analysis suggests that the cauldron once contained a braggot, a kind of mead consisting of just five ingredients: barley, honey, mint, meadowsweet, and yeast.

Teaming up with a local craft brewer, the researchers did their best to recreate the ancient drop as it would have tasted millennia ago.

According to those who've sampled the finished product, the braggot is certainly drinkable, if considerably tarter than what we tend to drink today.

"I got to sip the final product," writes North for NPR. "The result was smooth and pleasant – almost like a dry port, but with a minty, herbal tinge to it. It also packed an alcoholic kick."

"[Our] version would have been significantly cleaner than the prehistoric one, but we did succeed in producing something that provides those of us with jaded modern palates with a very different flavour profile," explains Arnold.

"The mint actually came through first, which was unexpected, followed by the slightly astringent meadow sweet, but the honey was barely in evidence (having been almost completely converted to alcohol)."

In addition to the lack of sweetness, there's also the strength to consider. "With an ABV [alcohol by volume] of over 8 percent, this is not your grannie's braggot," Arnold writes, "and although adding honey at this stage would probably make it more drinkable for [contemporary] mead imbibers, we decided to leave it as is."

While the ancient braggot probably won't be doing the rounds at your local – as the brewers don't think it would be something people would want to buy – it's a testament to the power of today's analytical techniques that we can recreate these ancient brews at all.

The researchers' analysis of the sediment has yet to be published, meaning the technique hasn't had a chance to be scrutinised by other researchers. Until it is, we can't know for sure how accurate their recipe is.

But this isn't the first time scientists have used such methods to recreate ancient brews. Previously researchers have given new life to 5,000-year-old Chinese beer and shipwrecked ales sunk off the coast of Finland – beverages once lost to the sands of time, now being tasted again.

Credit of course also has to go to the long-gone cultural practices that saw these ancient alcohols preserved as they were – without them, this little window back into history would remain shut.

"Luckily for us, they didn't just send people off to the afterlife with [swords and spears] – they also sent them off with the actual beverage," Arnold told NPR.

"It's a BYOB afterlife, you know? You have to be able to sort of throw a party when you get there." ■

## Winter Feed Recipes

### MCBA Fondant Recipe

2 Cups Water  
½ Tbl. Vinegar  
8 Pounds Table Sugar  
(*optional*)  
1 tsp. Honey-B-Healthy

1. Pour sugar, water, and vinegar into pot.
2. Bring to boil, stirring constantly.
3. Cover and boil 5 minutes.
4. Insert Candy thermometer, and continue to boil uncovered until temperature hits 234°
5. Remove from heat and cool to 200° F.
6. Add Honey-B-Healthy (*opt.*)
7. Whip with an electric mixer until mixture begins to turn white with air bubbles dispersed throughout.
8. Quickly pour into molds and allow to cool undisturbed.

### Pressed Candy Board

Make a 2" tall candy board frame from scraps of wood, staple ½" wire mesh to the inside for a candy support and drilled a ½" hole in the front for the bees to escape.

### Bee Candy Recipe

15 Pounds White (Cane) Sugar  
3 Cups Water

1. Put sugar into very large canning pot.
2. Add vinegar to the water
3. Pour the water into the pot, a little at a time, stopping to make sure it is all mixed into the sugar.
4. Mixing takes some muscle, but it doesn't require cooking the sugar.
5. Line the wire mesh with paper.
6. Pile on the wet sugar.
7. Level off the sugar with a wooden ruler, and set to dry.
8. It will set up and harden in 1-2 days.

### Lauri's Sugar Blocks \*

This recipe is not cooked in any way - the ingredients are dried or dehydrated to form the hard block.

10 Pounds White (Cane) Sugar  
1 Tbl. Citric Acid  
⅛ tsp. Electrolytes<sup>#</sup>  
3 Capsules Probiotics  
1 ¼ Cups real Apple Cider Vinegar (*with the Mother*)  
1 Tbl. Honey-B-Healthy (*Optional*)

1. Open Capsules into the Apple Cider Vinegar.
2. Stir in Citric Acid and Electrolytes into the Apple Cider Vinegar.
3. Add Apple Cider Vinegar mixture to the Sugar and mix together (your hands work best).
4. Roll out and lightly compress in 1" deep pan (*The disposable aluminum baking trays work really well*).
5. These will set up and harden overnight a food dehydrator set at 130° Fahrenheit, or a few days sitting out in an unheated greenhouse.

\* Tony modified Lauri's original recipe by adjusting the ingredient amounts based on 10# of sugar (for hobbyists that don't need as many blocks as commercial operations); he also added some additional strains of probiotics (based upon tresearch).



# Available online at ValleyVet.com; Agway has something similar.



# Middlesex County Beekeepers Association

## Membership Form

\$15 Annual dues per family, **payable to MCBA**. Mail this form and payment to: Rick Ressijac, 7 Coolidge Road, Ayer, MA 01432 *OR* bring it with you to a meeting.

**Please print CLEARLY.**

Name \_\_\_\_\_

Family Members' Name(s) \_\_\_\_\_

Address \_\_\_\_\_

City / State / Zip \_\_\_\_\_

Telephone \_\_\_\_\_

Email \_\_\_\_\_

How did you hear about us? \_\_\_\_\_

How many hives do you have? \_\_\_\_\_ Renewal  or New Membership

## Club Officers

### President

Tom Fiore  
president@middlesexbeekeepers.org

### Vice-President

Rick Reault  
vpresident@middlesexbeekeepers.org

### Treasurer

Allen Bondeson  
treasurer@middlesexbeekeepers.org

### Clerk / Membership Coordinator

Rick Ressijac  
membership@middlesexbeekeepers.org

### Director / Recording Secretary & Editor

Tony Pulsone  
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### Director / Mass. Beekeeper's Assoc. Delegate

Jen Reed  
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## Volunteers

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Kathy Martin  
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617.549.7460

### Librarian

Allen Bondeson  
librarian@middlesexbeekeepers.org

### Swarm Coordinator

Alexandra Bartsch  
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### Website

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webmaster@middlesexbeekeepers.org