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November 2016 LCBA Newsletter

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Questions? Suggestions? Resources you'd like to share, stories you'd like to tell?

Please contact LCBA Secretary Susanne Weil: secretary@lcba.community or call 360 880 8130

UPCOMING EVENTS

***Thursday, November 10 ~ LCBA Monthly Meeting:
Inside the Waggle Dance ~ Dr. Danny Najera***



Above left, Dr. Najera & friend (photo, Ross Coyle, Kent Reporter); right, Dr. Najera at a workshop (photo courtesy of Dr. N.)

When: 6 – 8:45 p.m.: Social Time, 6 to 6:30 p.m.; 6:30-7:30, presentation; 7:30, break; 7:45-8:45 business meeting & Beekeeping Q&A.

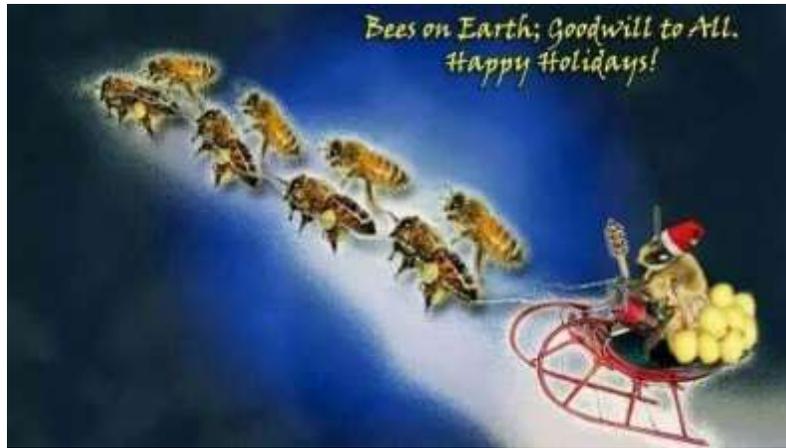
Where: 103 Washington Hall, Centralia College, 701 W. Walnut St., Centralia WA

Speaker: Dr. Danny Najera, Instructor, Green River Community College, Danny writes, “the biology of the honeybee is more complex than most people and most beekeepers know. We will introduce you to the complexity of the honeybee through the well documented waggle dances, then introduce some yet to be published data that will blow your mind.”

Also: Short business meeting & "beekeeping Q&A."



Above, [“The Waggle Dance”](#) ~ Image, Wikimedia Commons



Thursday, December 8 ~ LCBA's 8th Annual Holiday Potluck ~ New Location!

Please mark your calendars to share good food, good fellowship, door prizes, & after dinner, brief monthly meeting with board elections & bylaws voting, fundraising drawing for our 2017 Youth Scholarship Program, our traditional Beekeeping Q&A, & more.

Where: New Location – Borst Kitchen #2, Fort Borst Park in Centralia (directions will be in your December newsletter)

When: 6 – 9 p.m.: Social Time 6 to 7; Dinner 7 to 8; Brief Business Meeting, including Elections & Youth Scholarship Program Drawing, 8 to 9.

Please Bring: A dish of food to share & a plate, cutlery, & cup to eat/drink from. Borst Kitchen has tables & chairs, ranges, a refrigerator, & plug-ins for hot pots. LCBA will provide soda, water, coffee, tea, hot chocolate, & napkins.

Food Drive: If you'd like to bring canned food or dry goods for the Greater Chehalis Area Food Bank, please do – we'll have a donation box.

Drawing to support 2016 Youth Scholarships: Featured items will be noted in the December newsletter. If you have an item to donate, please bring it!

Questions? Contact Secretary@lcba.community; call 360 880 8130. Below, Borst Kitchen #2:





Above, January 12 Speaker Harvard Robbins' card & honey display at Shop-n-Kart.

Thursday, January 12

LCBA Monthly Meeting: Life As a Commercial Beekeeper ~ Harvard Robbins

When: 6 – 8:45 p.m.: Social Time, 6 to 6:30 p.m.; 6:30-7:30, presentation; 7:30, break; 7:45-8:45 business meeting & Beekeeping Q&A.

Where: 103 Washington Hall, Centralia College, 701 W. Walnut St., Centralia WA

Speaker: Lakewood-based Harvard Robbins, longtime commercial beekeeper, will speak about the ups and downs of life keeping bees commercially – pollination, selling package bees & nucs, transporting bees, selling honey, & more. Bring your questions!

Also: Short business meeting & "beekeeping Q&A."

Saturdays, January 21, 28, February 4, 11, 18, & 25

LCBA's Next Beginning Beekeeping Course: "Your First Year of Beekeeping"

When: 6 Saturdays, 9 a.m. to noon

Where: Washington Hall 103, Centralia College, 701 W. Walnut St., Centralia WA 98531

Course Description: This class is designed to help beginners learn to keep bees successfully in southwest Washington's unique conditions. Topics include basic bee biology/behavior, equipment & apiary set-up, seasonal management, identifying & managing parasites & diseases, honey harvesting, over-wintering, & more. Students completing the course earn LCBA's diploma. This course is part of Centralia College's Continuing Education Program.

Registration Begins Early December: visit our website for the registration brochure (http://www.lewiscountybeekeepers.org/upcoming_events) or ask for one at a meeting.

Thursday, February 9 ~ LCBA Monthly Meeting:

New Long Langstroth & Observation Hive Designs – John Edwards, Ruhl Bees



LCBA October 13 Monthly Meeting Notes

LCBA Vice President Bob Harris presided over the meeting in the absence of President Kevin Reichert (after surprising all present by introducing himself as Kevin...). Before starting tonight's presentations, Bob reported that our former Treasurer, Jon Wade, is undergoing treatment for pancreatic and liver cancer; Bob circulated a card to sign in support of Jon.

Using Digital Hive Tools to Help Manage Colonies ~ Rick Battin



LCBA Treasurer Rick Battin introduced his thermal camera, which visualizes heat to help identify a bee cluster, whether in a hive box or behind a wall at a cut-out. Rick noted that this is not just an app: some that are just apps are available, but to get results, Rick notes that you need a different apparatus. In the interest of full disclosure, Rick noted that he has a thermal camera from Fler that runs \$700, but has its own screen on the back. He also has one that works as a phone app: a small micro-USB piece to plug into the phone. It runs \$200: its advantage is that you can use CPU and other features of your phone along with it. Rick noted that with this small device, "you have to be very careful with it." Phil asked, "Is that the same one I found under my foot at that Onalaska carve-out last summer?" Rick said that it was.

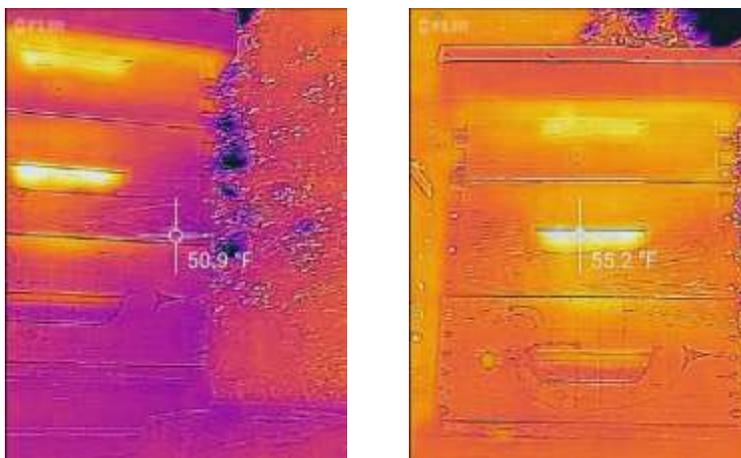
The photo in Rick's first slide, pictured above, shows two colonies: you can see the cluster, glowing bright yellow. Rick noted that the app reads the surface temperature of the wood, so on a rainy day, you would not see the cluster. Rick observed that the app puts a gradient of color on an image, so it will find a way to make part of a close up of a cluster blue.



Above, you can also have fun shooting friends with the thermal camera: left, Phil Wilson, right, Martin Stenzig & Susanne Weil at a carve-out in Onalaska, July 2016.

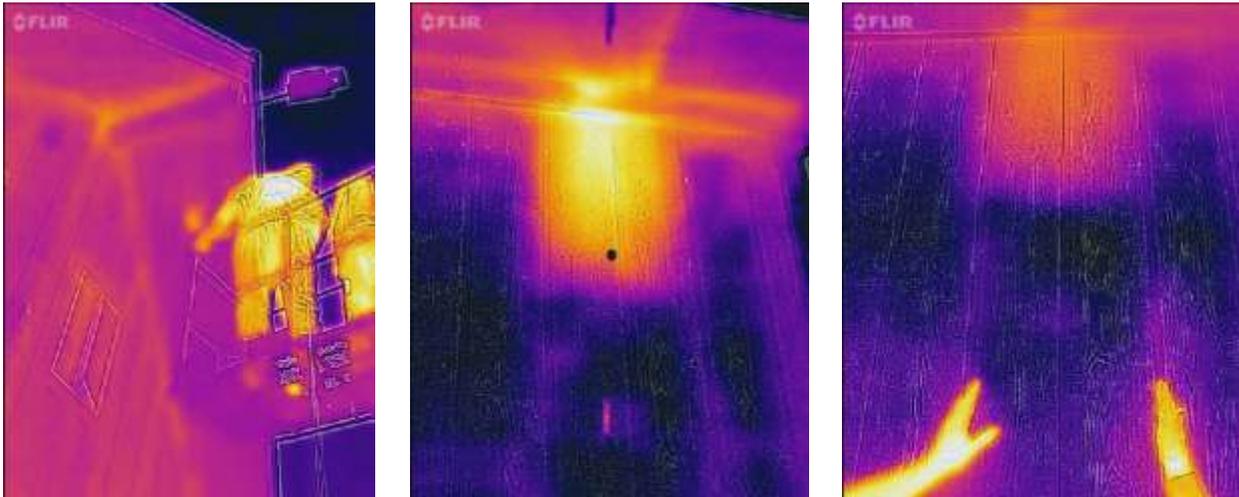


Tracking Bees in the Hive Using Thermal Cameras: Rick’s next slide – pictured above, far left - showed a colony whose cluster had moved up into the top. The photo also shows two upper entrances – one a drilled hole, the other a notched inner cover – these appear as bright light spots. The next shot, above middle, shows a very bright spot at the bottom: this represents a bunch of bees coming out of an entrance, chasing off yellow jackets. Rick pointed out that you can tell from the colors how big that colony is. Bob asked if, when you open that bottom box, you would find the frames to the left? Rick said possibly, but it also could represent the higher rate of “bee traffic” as they were streaming to the opening in the entrance reducer to fight off the yellow jackets. In Rick’s next slide, above right, the bulk of the colony is at the top. Sometimes, Rick noted, the bright light at the top just means that heat is escaping from the top of hive. There is a laser app that can pinpoint what you are looking at if you want more precision.



The two photographs above picture the same hive in two views with a temperature reading stamp, which shows five degrees’ difference in temperature between the handhold at the center and out toward the rim of the box. Dan asked what the outside temperature was: Rick said that it was about 60 degrees. Buck asked if the hive boxes were facing the sun, and Rick said that they were. Buck wondered if the handholds could be absorbing sunlight. Rick thought that maybe they could, but noted that he sees this consistently because the app brightens the hottest thing in the image: if you had a hot cup of coffee on top, it would ‘blue out’ the rest of the colony. Dale Richart asked if there was a difference based on different kinds of wood or grains –

or the weight. Rick said that it would not make a difference because the colors are basically false colors: whatever is highest temperature will appear as the brightest yellow.



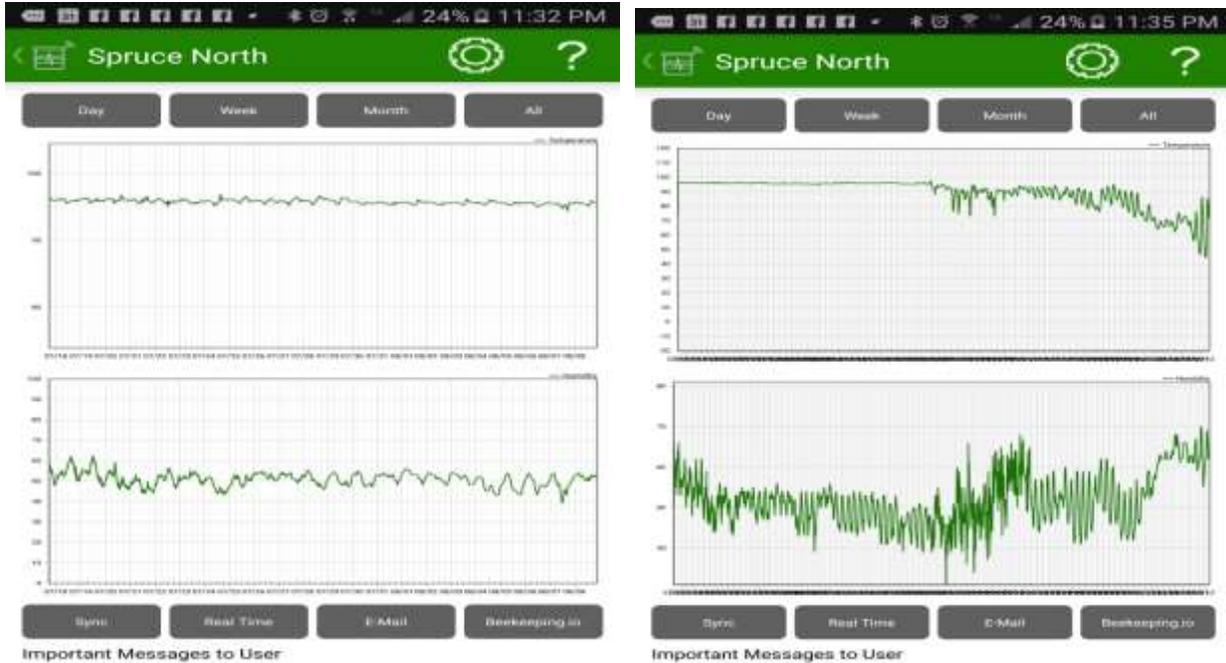
Using the Thermal Camera To Find Bees at a Carve-Out: The value of thermal photography in wild bee carve-outs was demonstrated in the photos above, from a carve-out in Onalaska last July. In the upper left photo, Kevin Reichert and Martin Stenzig are pictured up on a lift, looking at the bright spot which is the colony. This helped show where the best place was to start cutting up this guy's house. Rick shot this from down on the ground; they were two stories up. In the middle photo, the colony is clearly visible as a bright yellow cluster; the photo on the right shows the hands of Kevin and Nancy Toenyan as they were deciding what runs of comb to cut. Thermal imaging can save time – as well as damage to a home – in a carve-out!

How the Thermal Camera Helps in Hive Management: Bob said that he could see the benefit for carve-outs, but asked whether this camera is mainly a fun toy, or is there an application for monitoring the health of the colony in general hive management? Rick said that there is: going out to the bee yard in active bee season, if he sees a smaller bright area in a colony that was large, he knows that's the one he wants to check on first. Rick added after the meeting that most of his images were taken in the late afternoon or early evening – he often arrives home from work too late to do much with the hives, but going around and taking a quick look at the heat output can help him prepare a to-do list for the following day, sometimes readying boxes or equipment that evening. It gives that extra knowledge that helps him reduce unnecessary inspections. Rick also noted that he has found gaps from wood warping and twisting: nothing that would not be found with a keen visual inspection, but as the weather cools these heat loss spots become very apparent.

Thermal imaging is especially useful in winter management: you know that a “blue colony” is dead, so you can clean it up before wax goes to waste. Mel Grigorich noted that Kent Yates works for similar information by drilling a small hole, inserting a thermometer, and reading it from there.

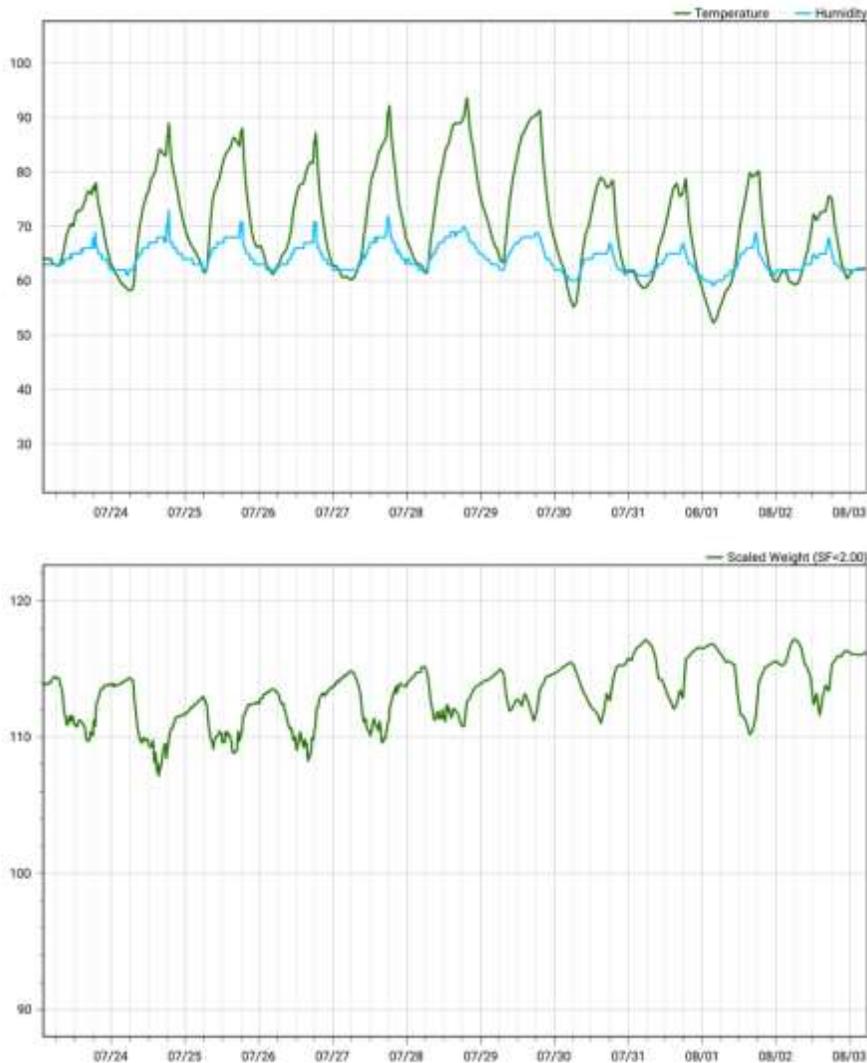
Digital Hive Monitoring Tools: Rick also uses digital hive monitoring tools, which help him keep tabs on his colonies while he is at work. Rick uses Broodmapper, a program that picks up temperature and humidity readings in the hives, from plastic strips containing a digital monitor inserted between hive boxes; you then download data from the app into your computer,

where it will generate monitoring charts for you. Rick has his set to download data every hour (more often would burn through the battery). Rick passed one of the strips around, noting that the bees had propolized it.



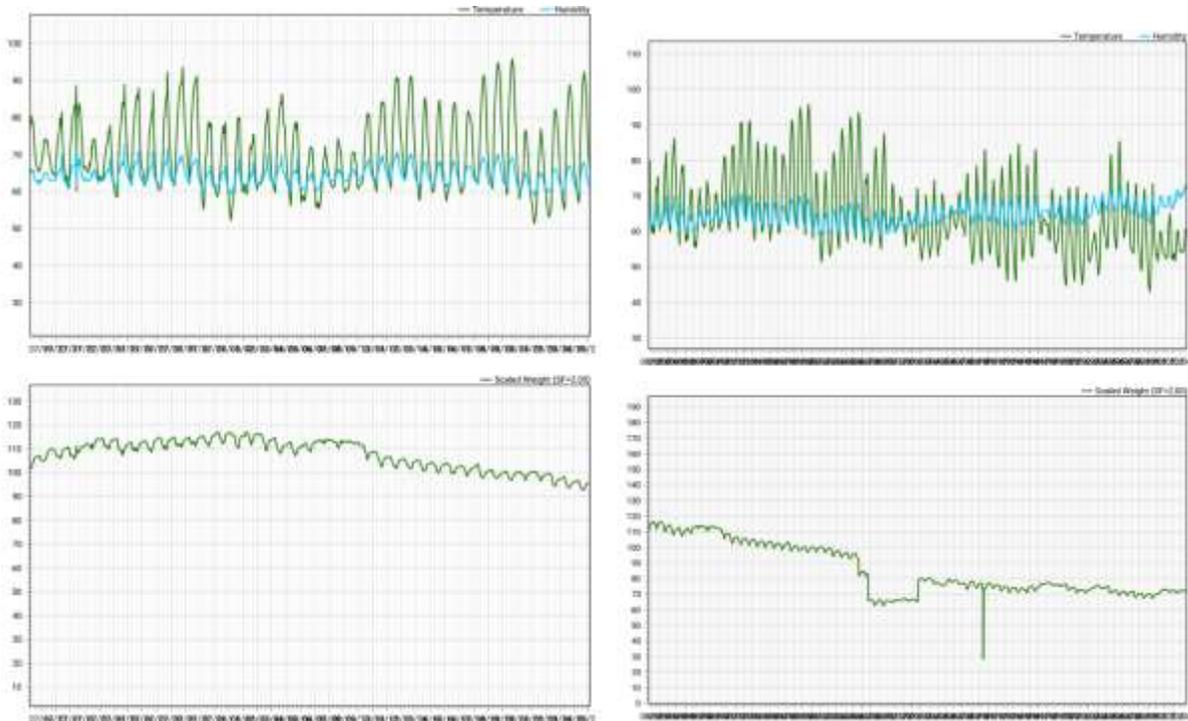
Pinpointing when a colony swarmed using Broodmapper temperature data: The images above are screen captures of digital readings on Rick’s computer. At left, the upper screen shows temperature – consistently around 95 degrees in the brood nest, with only a degree or so of fluctuation. The lower screen shows humidity. The upper right hand image, though, shows when the colony swarmed: the temperature dropped dramatically with the reduced number of bees. Dan asked whether the image represented one swarm or two, because two dips are visible: Rick said it was possible that there had been a secondary swarm because the time frame of the image covers 4 weeks with the “squiggles” covering a two-week span. Rick noted that the lower images, showing humidity, are less indicative: even when colony swarmed, the humidity measure did not show much difference. However, below, note the temperature spike during Rick’s Journeyman apiary inspection when the brood box & monitor were removed:





Above, top image: green lines represent temperature, blue, humidity. Below, the green line represents scaled weight over the same span from July 24 to August 3.

Monitoring Colony Weight: The slide above shows the scale for measuring colony weight. Rick noted that he put a 2x4 on the other side to balance the monitor, because it needs to be stable: with some of the squirrely beams in his apiary, some days Rick would go out with and synch his phone with the monitor, and it would read negative five pounds, a problem fixed when he balanced with the 2x4. What puzzles Rick about this slide is that in the lower image, which represents weight, you can see from the squiggles the bee workforce coming and going, but you see less weight at night. However, you can see some weight added each day, as the colony is storing more food. Dan suggested that the lower night-time weight measures could reflect the cluster moving around and thus shifting the weight, since the balance was not perfect. Pat Sturgill asked if the monitor measures the weight of honey or the brood: Rick said that it measures total weight. Susanne Weil noted that this would be useful for beekeepers who have full time jobs and can't always be on site inspecting, and also don't want to go into their bees too often – but if they see that weight trending down, then they would know they must look and maybe intervene.



Above, the upper slides show temperature (green) & humidity (blue) measures; lower slides show the weight measures that accompanied the upper images.

Above, the images on the left show colony weight declining as the nectar flow was ending and the bees were finding less forage: Rick noted that this suggests he could have been feeding earlier. In the images on the right, above, we see the effects of manipulations, taking off a box and putting on a box with a little less weight/honey. The big dip in the lower right image was one hour at our fall management workshop. Rick commented that if you suddenly see no weight, then you know that your hive has fallen over or been stolen!

Want To Know More? Rick Recommends These Links & Podcasts: Groups like BeeInformed are getting into digital hive management tools; Brushy Mountain is mainly doing weight measures. *Beekeeping.io* is a citizen science website that will graph the data for you: their Kickstarter was their initial entry and they are now producing these. After the meeting, Rick emailed some information about links that interested beekeepers can check out. He writes, “the first two links cover the type of scale that I have”:

<http://broodminder.com/#Products>

<https://www.youtube.com/watch?v=u2PYpoDd4aY&feature=youtu.be>

“The other three are different types. The Arnia system is definitely super expensive, but also has really nice streamlined software and presentation. Some of these things are spendy, but I also think they will be coming down significantly in the future as all technology does.”

<http://app.beekeeping.io/apiary/overview>

Arnia: <http://www.arnia.co.uk/>

<https://beeinformed.org/solutionbee/> \$450

<http://www.brushymountainbeefarm.com/Hive-Scale/productinfo/714/> \$525

Podcast from Beekeepers Corner: <http://www.bkcorner.org/> Rick highly recommends this podcast: “It’s from New Jersey, so the weather conditions are a little different, but still pretty similar. He often interviews other beekeepers. Unlike Washington, New Jersey still employs a state apiarist so he is often a guest or at least quoted on the podcast. Great notes and links. The guy is a member of the New Jersey state beekeepers association, and holds an office as their technology coordinator, so he occasionally throws in a little stuff about his club and things at the board are doing.”

Podcast from Kiwimana Buzz: <http://kiwimana.co.nz/category/podcast/> This New Zealand podcast is by a couple who own a bee supply store. Rick writes: “Not all things here are as applicable to our area, but it is interesting since they are on the other side of the world, seasonally six months opposite of us, so right now I am listening to them gear up for spring. It’s a good reminder to keep looking forward to the next season. Podcasts are one way I keep up on new things coming onto the market, and the reviews.” Rick notes, “They talk about some other topics related to farming and the political environment in New Zealand.”

Bob thanked Rick for an informative and unusual presentation!

Making Winter Patties ~ Dan Maughan, “The Bee Chef”



Next, Community Outreach Coordinator Dan Maughan donned his chef’s hat and took to the stage to show us how he makes his special winter patties. Dan explained that with so many colonies, his bees were eating him out of house and home. He wanted to supplement their winter feed, so he got some Mann Lake winter patties, but they were spendy at \$20 for ten pounds. Dan’s bees liked those patties, though the ingredient list is basically sugar, high fructose corn

syrup, and “plant protein products.” Dan decided he’d try to make them at home and see if he couldn’t make them a bit healthier. Blending several recipes, he came up with his concoction:

Winter Sugar Patty Recipe

By Dan “The Bee Chef” Maughan

Ingredients:

5 pounds pure cane sugar

1 cup light corn syrup to soften the patty

1 pound pollen patty torn into smaller pieces to add small amount of protein

1 cup apple cider vinegar and/or ½ tsp citric acid to help break down the big sugar molecules into smaller and simpler ones, easier to digest

1 Tb Pro Health or Honey Bee Healthy or similar product

You can also add a small amount of minerals or vitamins if desired.

Directions:

Mix in a bread mixer

Make a serving size ball and place on paper bag or similar paper

Smash to ½ inch thick and let sit for a day to harden a little

Then serve to your bees!

Dan made the recipe right in front of us (see photos). The high fructose corn syrup makes the mixture malleable. When he adds the pollen patty, he leaves on the paper – not a problem. Dan noted that though we might be concerned that giving pollen in the winter might make the bees raise brood or do other things you don’t want them doing in winter, he hasn’t found his bees reacting that way. Instead, it seems to bolster their health. They need a little protein - not a lot. When mites suck hemolymph out of bees, it compromises the bees’ capacity to synthesize protein, so they have an anemic response.

Dan adds one cup cider vinegar or one tsp citric acid: he couldn’t decide which to use, so he uses them, and the bees like it. The cider vinegar inverts sugar from heavy double sugar molecules down to the simple sugars, fructose and sucrose, so it is easier for the bees to digest. It also lowers the pH to about 5. Online, he read that it’s best only to use apple cider vinegar: he can’t recall why, but he went with it, and the bees seem to like it. Dan also uses a tablespoon of Pro-Health (similar to Honey-B-Healthy): If you like, you can add minerals and vitamins, as Kevin does: Dan got some called “Complete” from Mike Radford at Northwest Bee Supply. He does not use it in this recipe, but probably it would work well.



Chef Dan mixing his winter patties ~ photos by Phil Wilson

Dan commented on the process: whenever you mix a batch of cookie dough or bread, you start with liquids first, so he started with the cup of high fructose corn syrup, then adds the pollen patty, ripped up into small pieces so that your wife won't kill you when you put this in the bread mixer. Once, Dan confessed, he used a whole patty: the bread mixer sounded like it was going to die. Bob asked, "Does Larissa let you do this?" Dan just smiled and said, "I married well."

Mel Grigorich asked if Dan leaves the paper on the pollen patty: Dan said that it doesn't seem to matter. Next, he adds the cup of cider vinegar, followed by the citric acid. Gottfried noted in response to a question that you can find citric acid anywhere that sells pickling supplies. Next, Dan adds that tablespoon of Pro-Health. Then get your mixer, so pollen patty well distributed and then put in the rest of the sugar.

Dan passed around a box of Mann Lake patties and noted that his comes out looking pretty similar, displaying one of his batches, mixed ahead of time: Mel commented that it looked like applesauce; Dan said "it doesn't taste like it, though" (no one volunteered to taste-test!). He makes it into a little ball and mashes it down on the paper to be about the size of a peach or apple. One he made the day before our meeting weighed about half a pound. "They look better when not rained on," Dan quipped. Bees have to crawl around the paper to get to the candy, so often, he lays it down upside down with the paper up to make it easier for bees. Sometimes they eat it up in a couple of days; sometimes, it takes a long time. If it's in the hive too long, it will dissolve to syrup and drip, but it's not a bad problem because the bees will clean it up, and they like to lick each other anyway.



Above left, Dan's patties; above right, the Mann Lake version

Questions: Bob asked whether Dan has tried to freeze the patties; Dan said that he had not, but he might try it. He's kept them outside, and they harden up. Kimo Thielges asked if drying them outside attracts yellow jackets; Dan said that he does the drying inside, but is sure yellow jackets would like them if they could get to them. Marvin McCoy asked how many to feed per colony – Dan said that he gives them one at a time. He usually checks in November, then in December and January; he likes to check them every couple weeks, as weather allows.

Brian Moog asked what Dan sees as the advantage over hard candy; Dan said that he finds the patties easier to make, and also easier for bees to eat, plus it gives them a little protein. Dale Richart asked whether there is any advantage to moisture in the patty, saying he was asking because he has a dehydrator. Dan said that the initial moisture helps bind the patty: the first time he tried it without vinegar, and it got crumbly. Mel Grigorich asked whether the patties go on top of the frames; Dan said yes. Steve Howard noted that both could work – a slab of hard candy with a pollen patty on the side. Dan's analogy is that it's easier to eat sprinkles of salt than a whole block, and maybe same applies to sugar, so he's not sure that the hard candy really is a feast. Jina asked whether the vinegar prevents dysentery; Dan said that might be why apple cider vinegar is considered the go-to rather than other vinegars. Dan finished up his presentation by giving away the three patties: Dale spoke up first and took them home, and we all thanked Dan for his presentation.

October Business Meeting Notes

VP Bob Harris suggested that given the rain, we skip the break and abbreviate the business meeting so that no one would have to swim home, and all agreed.

Treasurer's Report: Rick Battin reported that we have \$5,027.34 in our general account and \$1,969.31 in the Youth Scholarship fund. This is about same as last month since we've had no major expenses, though we will be paying rental for our December potluck space as well as to the college for our meeting room before the year's end.

Free Trees! Marvin McCoy announced that he had three little trees in buckets that give blossoms good for trees, including a bee-bee tree. Tracy Chillelli, Barbara Grega, and Gordon Bellevue raised their hands first and took the little trees home to plant. Thank you, Marvin!

Club Apiary: Bob reported that our apiary is in progress, with the ground prepared. Phil Wilson noted that he has been doing homework about grants: he noted that the trouble with grants is that they tend to run about a year or two in the future. He talked to the USDA, who wanted to know

whether the apiary is club property; however, it will be a lease, though Bob does not plan to charge the club. Phil also suggested that we approach WASBA; Susanne noted that the WASBA grants go for public outreach projects, and that they only match after the club spends the money. Phil observed that we might need a cement slab and pathways for handicapped; Bob said that site will be accessible without those. Bob thinks funds will not be a big issue in the first year, as some members have already volunteered to donate some equipment. The question of building a shed was raised; Bob suggested that since he has a storage area in his barn with a hoist, we won't have to worry about that during the first year. Phil agreed to keep looking for funding sources, and we thanked him for his efforts.

Holiday Potluck Planning: Susanne called for volunteers and about a dozen members stepped up. Susanne and Dan will coordinate with them soon – thank you all!

Bob adjourned the meeting, & we all darted between raindrops to our cars.

OXALIC ACID FUME VAPORIZERS:

An Opportunity to Knock Down Mites During the “Broodless Window”

A public service announcement to beekeepers – we have had a good deal of coverage about how to use oxalic acid fume vaporizers at our meetings and workshops. Now that “active bee season” is over and our bees are snug in their winterized hives, we can take advantage of the “broodless window” (or relatively broodless) in which Varroa mites are primarily phoretic (hitchhiking on the adult bees) – and use the oxalic acid fume vaporizer to knock down mites. Below are photos from LCBA President Kevin Reichert, showing the mite knockdown on sticky boards after applying oxalic. For more info on how to use the vaporizer, see our February 2016 newsletter.



Above, mite drops on sticky boards – photos, Kevin & Jeanne Reichert

Another Winter Management Note – Check Your Bees’ Sugar & Patty Supplies!

Nancy Toenyan reported on November 4 that she had taken advantage of a rainless window to check her bees, and to her surprise, they had eaten the sugar candy slabs she had given them. It's a good idea, when the weather allows, to do a quick check and see if the bees need extra food; it's also a good idea to make extra hard candy and patties to have on hand for rainless days!

SNACKS & DESSERTS ~ NATIONAL HONEY BOARD

Honey and Nut Glazed Brie

Ingredients:

- 1/4 cup - honey
- 1 Tablespoon – brandy
- 1/4 cup - coarsely chopped pecans
- 1/4 oz. (about 5-inch diameter) - Brie cheese

Directions:

In a small bowl, combine honey, pecans and brandy.
Place cheese on a large ovenproof platter or 9-inch pie plate.
Bake in preheated 500°F oven 4-5 minutes or until cheese softens.

Drizzle honey mixture over top of cheese.

Bake 2 to 3 minutes longer or until topping is thoroughly heated. Do not melt cheese.

Yield: 16 to 20 servings.



(Photo, National Honey Board)



Photo, [Greek Orthodox Baklava](#), from [The Food Plate](#)

Have you ever wanted to try making Baklava? Here's a new recipe:

Ingredients for the Baklava:

- 1/2 lb. - sheets filo dough, frozen
- 2 cups - blanched almonds, ground
- 3/4 cup – sugar
- 1 teaspoon - lemon rind, grated
- 3/4 teaspoon - cinnamon, ground
- 1 cup - unsalted butter, melted
- almonds, sliced, for garnish

Ingredients for the Syrup:

- 1/4 cup - sugar
- 1/4 cup - water
- 1 cup - honey
- 1 Tablespoon - rose water

Directions for Making Baklava (National Honey Board):

1. Thaw filo dough for 8 hours in refrigerator, if frozen. Unfold sheets of filo dough so they lie flat. Cover with waxed paper, then a damp towel, to prevent them from drying out.
2. Preheat oven to 325°F. In a medium bowl combine almonds, sugar, lemon rind, and cinnamon. Generously butter an 8- to 9-inch-square pan.
3. Carefully fold 2 sheets of filo to fit pan; place in pan one at a time, brushing each with butter. Sprinkle about 3 Tablespoons of the almond mixture over top sheet. Fold 1 sheet of filo to fit pan; brush with butter. Sprinkle evenly with another 3 Tablespoons almond mixture.
4. Continue to add layers, using 1 folded sheet of filo, a generous brushing of butter, and 3 to 4 Tablespoons almond mixture for each, until nut mixture is used up (there should be about 10 nut-filled layers).
5. Fold remaining 2 to 3 sheets of filo to fit pan. Place on top, brushing each, with butter before adding the next. With a very sharp knife, carefully cut diagonally across pan to make small diamond shapes--about 1 1/2 inches on a side--cutting all the way to bottom of pan. Pour on any remaining butter.
6. Bake until golden brown (about 45 minutes). Pour warm Honey and Rose Water Syrup over top. Decorate each piece with an almond slice. Cool before serving.

Honey and Rose Water Syrup (last four ingredients): Combine sugar and the water in a 1 1/2-quart saucepan; bring to a boil, stirring. Mix in honey and cook until syrup boils again. Remove from heat; mix in rose water.

BEES IN THE NEWS



Above left, "Yellow Faced Bee" (Katja Schulz, Flickr.com); right, Hylaeus assimulans, one of seven species of yellow-faced bee to receive Endangered Species List protection (Matthew Shepherd, Xerces Society)

"7 bee species have been added to the US endangered species list": *Science Alert*, 3 Oct 2016

No, honey bees have not been declared endangered, but the Fish and Wildlife Service has put 7 species of yellow-faced bees native to Hawai'i on the Endangered Species list - "the first US bee species to earn federal protection." Here are the 7: "Hylaeus anthracinus, Hylaeus longiceps, Hylaeus assimulans, Hylaeus facilis, Hylaeus hiliaris, Hylaeus kuakea, and Hylaeus mana." According to the Xerces Society, some live on the coast, others in forests. Both human incursions into their habitat and competition with invasive species have caused their numbers to drop. So far, no specific plans have been made to protect their habitats.

The rusty-patched bumble bee, “a dwindling species . . . once common in the upper midwest and north-eastern US,” may be listed next: Fish and Wildlife has proposed their addition to the ESL. To read more, visit: <http://www.sciencealert.com/seven-species-of-bees-have-been-added-to-the-endangered-species-list> .

“Neonicotinoids Lawsuit”: *Bee Culture*, 30 October 2016

A federal lawsuit may determine whether neonicotinoid-coated seeds should “be regulated as pesticides under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA).” The suit has been brought by the Pollinator Stewardship Council, the American Bird Conservancy, and individual beekeepers. Defendants include the EPA and groups “representing seed manufacturers, ag retailers, and corn, soybean, cotton and wheat growers.”

In 2013, the EPA issued a “guidance [which] said that planting neonic-coated seeds is not considered a “pesticide use.” Instead, EPA said the seeds can be considered “treated articles” that are exempt from FIFRA regulation.” Plaintiffs in this case argue that because neonicotinoids coating seeds become infused in the plant tissue – as well as the nectar and pollen on which bees forage – they do not fall under the “treated articles” category. Plaintiffs have noted that in 2003, an EPA fact sheet for clothianidin stated that it “has the potential for toxic chronic exposure to honey bees, as well as other nontarget pollinators.” In turn, EPA argues that honey bee losses are the result of “a complex set of interacting stressors.”

To read more, visit: http://www.bee-culture.com/catch-buzz-neonicotinoids-lawsuit/?utm_source=Catch+The+Buzz&utm_campaign=074cfb861a-Catch+The+Buzz+4+29+2015&utm_medium=email&utm_term=0_0272f190ab-074cfb861a-256261065



Neonicotinoid-treated corn seeds (photo, RollingStone.com)

“High Number of Pesticides Within Colonies Linked to Honey Bee Deaths”: *American Bee Journal*, 14 Sept 2016

A new study has assessed the interactions of multiple pesticides - fungicides, herbicides and insecticides - in bee colonies and found “that the number of different pesticides within a colony—regardless of dose—closely correlates with colony death.”

Dennis vanEngelsdorp, lead researcher, said that “Our results fly in the face of one of the basic tenets of toxicology: that the dose makes the poison. We found that the number of different compounds was highly predictive of colony death, which suggests that the addition of more compounds somehow overwhelms the bees’ ability to detoxify themselves.”

The study sampled 91 honey bee colonies belonging to three commercial beekeepers who move their bees for pollination, following the bee colonies from Florida up the East Coast. Over the season, “93 different pesticide compounds found their way into the colonies . . . accumulating in the wax, in processed pollen known as bee bread and in the bodies of nurse bees.”



[Dead bees in a French beekeeping farm.](#) Credit: Raymond Roig; Wikimedia Commons

The scientists measured “total number of pesticides; the total number of “relevant” pesticides (defined as those above a minimum threshold of toxicity); and each colony’s “hazard quotient,” a measure devised by other researchers to integrate the total hazard posed to each colony by the cumulative toxicity of all pesticides present. All three measures correlated with a higher probability of colony death or queen failure. In addition, the researchers found between five and 20 different pesticide residues in every sample of bee bread that exceeded a hazard quotient’s safety threshold. The highest number of pesticides accumulated in the colonies early on, shortly after beekeepers placed colonies into early season flowering crops like apples and blueberries.”

Fungicides, usually viewed as least threatening of the compounds used to manage pests, also were found to threaten colonies and in particular to endanger queens. The study showed that “colonies with very low pesticide contamination in the wax experienced no queen events, while all colonies with high pesticide contamination in the wax lost a queen during the beekeeping season.” This may help explain the dramatically shortened lifespans of queens that beekeepers have been observing in the past few years.

The study did not find neonicotinoids in the mix. VanEngelsdorp said that “We just did not find neonicotinoids in the colonies. There were some trace residues of neonicotinoids in a few samples, but not nearly on par with other compounds. However, it’s possible we did not test the right matrix—we did not test nectar, for example—or that the product breaks down faster than others in the collection process or that neonicotinoids are simply not very prevalent when crops are flowering.”

One conclusion is that “We have to figure out ways to reduce the amount of products that bees are exposed to while still helping farmers produce their crops,” vanEngelsdorp said. “This will require careful examination of spray plans, to make sure we only use the products we need, when we need them, in order to reduce the number of products bees are exposed to while pollinating different crops.”

To read more, visit: <http://us1.campaign-archive2.com/?u=5fd2b1aa990e63193af2a573d&id=f37246a6e6&e=e9ff21e0b>

“The other side of the Neonic conversation...Study: Scientists That Won’t Link Pesticides To Bee Deaths Are Often Funded By Agrochemical Industry”: *Bee Culture*, 28 Sept 2016

According to results from Freedom of Information Act requests sent to 135 British universities, Bayer and Syngenta donated over \$2.6 million to help fund research on how neonicotinoid pesticides affect honey bees and other pollinators. The question is: do these funds affect the outcome of research studies?

Sussex University biology professor Dave Goulson commented that “It does seem to be the case that research funded by agrochemical companies rarely seems to find evidence that their products harm the environment, while independently-funded research often finds major adverse effects caused by the same products.”

For example, a study published in August 2016 “compared wild bee populations to levels of neonicotinoid use on oilseed rape crops in the U.K. between 1994 and 2011. . . . [and] showed that the populations of dozens of wild bee species declined significantly as the use of neonicotinoid pesticides increased, with the populations of one species down as much as 30 percent.”

To read more, visit: http://www.beeculture.com/catch-buzz-side-neonic-conversation-study-scientists-wont-link-pesticides-bee-deaths-often-funded-agrochemical-industry/?utm_source=Catch+The+Buzz&utm_campaign=a3b9fbcf92-Catch_The_Buzz_4_29_2015&utm_medium=email&utm_term=0_0272f190ab-a3b9fbcf92-256261065

“A New Organic Acid Varroa Mite Medication,” *Bee Culture*, 15 Oct 2016

The European Medicines Agency (EMA) has recommended that the EU allow the marketing of VarroMed (oxalic acid dihydrate / formic acid) for Varroa mite control. VarroMed is an in-hive dribble that blends oxalic acid dihydrate and formic acid. Researchers recommend using it as one of multiple treatments in an integrated pest management program, and note that it should not be used while honey supers are on colonies.

Both laboratory and field studies in a range of weather conditions tested VarroMed. It “was effective in killing more than 80% of mites, which is below the effectiveness level of 90% recommended by the CVMP Varroa guideline. However, CVMP agreed that a lower level of 80% could be accepted when integrated Varroa control techniques are put in place. Repeated treatment of VarroMed might also result in increased bee mortality, and careful dosing is recommended to avoid overdosing.”

The next step is up to the European Commission, which will decide whether or not to grant an EU-wide marketing authorization. To read more, visit: http://www.beeculture.com/catch-buzz-new-organic-acid-varroa-mite-medication/?utm_source=Catch+The+Buzz&utm_campaign=6021dd0365-Catch_The_Buzz_4_29_2015&utm_medium=email&utm_term=0_0272f190ab-6021dd0365-256261065.



Honey is a popular ingredient in many condiments: photo, Bee Culture

“Healthful Honey Takes On New Role as Sugar Consumption Is Linked to Obesity, Diabetes and Heart Disease,” *Bee Culture* 11 Oct 2016

A new market research study shows that as health concerns about links between sugar consumption and diabetes and cardiovascular problems is leading shoppers to “switch to sweeteners perceived as more healthful, such as honey.” In consequence, many food producers are infusing honey in a wide range of products. According to Keith Seiz, spokesperson for the National Honey Board, “Honey complements today’s clean label formulating trend. Marketers are bringing honey to the front of the package to clearly communicate to consumers its inclusion in a packaged food.”

The NHB teamed up with Technomic, a Chicago marketing research firm, to study U.S. honey consumption. They found that “of the 576 million lbs of honey sold in the United States in 2015, 40% was sold at retail as packaged honey. Food processors used 30% of the honey in prepared and packaged foods, while chefs and food service operators used 21%. The remaining 9% went into such industrial non-food applications as personal and beauty products, candles, medicine.”

“We were surprised to learn that beverage was the leading food processing application, with packaged cold beverages being No. 1 followed by beer being No. 2,” Mr. Seiz said. “Cereal, both hot and ready-to-eat, came in third, followed by bread and doughs. Granola, snack and nutrition bars were fifth.”

The U.S. must import “about two-thirds of the honey” needed for all these consumer goods, primarily from “suppliers based in Argentina, Brazil, India, Ukraine and Vietnam. The leading honey-producing U.S. states are California, Florida, Montana, North Dakota and South Dakota.”

To read more, visit: http://www.beeculture.com/catch-buzz-healthful-honey-takes-new-role-sugar-consumption-linked-obesity-diabetes-heart-disease/?utm_source=Catch+The+Buzz&utm_campaign=336cc488f9-Catch+The+Buzz+4+29+2015&utm_medium=email&utm_term=0_0272f190ab-336cc488f9-256261065 .

“U.S. Customs and Border Protection Officers and Partners Seize 132 Drums of Illegally Imported Chinese Honey”: *American Bee Journal*, 3 Oct 2016

It’s de ja vu all over again – for the third time in 2016, On Aug. 12, U.S. Immigration and Customs Enforcement’s (ICE) Homeland Security Investigations (HSI) impounded 42 tons of

Chinese honey that had been illegally transshipped to the U.S. via Taiwan. This time, the 132 55-gallon drums were seized in Miami. According to ICE, “the evaded anti-dumping duties on this shipment of Chinese honey would be nearly \$180,299.”

The honey was analyzed in a lab before it was seized, and scientists “determined that the honey had a greater than 99 percent probability match with honey originating from China.” The honey will be destroyed. To read more about the legal issues and import rules, visit:

<http://us1.campaign-archive2.com/?u=5fd2b1aa990e63193af2a573d&id=dc8bf0b684&e=e9ff21e0bb> .

“Scientists have shown that the drone can leave behind a virus that may infect the queen with the disease deformed wing virus. The Queen dies, the colony does too”: *Bee Culture*, 6 Oct 2016

Although “queen promiscuity” helps promote genetic diversity within a colony, a new study has shown that this same promiscuity exposes queens to greater risk of venereal disease – and subsequent colony collapse. As beekeepers know, when bees mate, the drone’s mating equipment break off, leaving part behind inside the queen. The new study has shown that drones also leave their viruses inside the queen, specifically deformed wing virus. “Since the queen mates with multiple partners in the course of a mating event, there are multiple risks of small Trojan horses being left behind in her,” according to the study.

The study selected queens from colonies that were not infected with DMV, then exposed the queens to mating with both infected and non-infected drones. Queens who mated with DMV-infected drones “also often became infected with the disease.” Since one key factor in colony failure is queen failure, this new finding shows yet another reason why queens – and their colonies – are dying. To read more, visit: http://www.bee-culture.com/catch-buzz-scientists-shown-drone-can-leave-behind-virus-may-infect-queen-disease-deformed-wing-virus-queen-dies-colony/?utm_source=Catch+The+Buzz&utm_campaign=8a84ac76b4-Catch_The_Buzz_4_29_2015&utm_medium=email&utm_term=0_0272f190ab-8a84ac76b4-256261065

ANNOUNCEMENTS

Do You Sell Wax? If you are an LCBA member and would like to be listed on LCBA’s Buy Local Honey page, please email secretary@lcba.community with your contact information, prices, and a photo if possible.

Western Apicultural Society Newsletters: http://groups.ucanr.org/WAS/WAS_Journal. Click on the line in the paragraph on the right as directed. If you’re still getting the old issue, click on "empty cache" in your browser or "refresh" or "reload" under VIEW in your menu bar.

WSBA Newsletter: Pick up your copy online at www.wasba.org: click on "Newsletters."

That’s all for now ~ take care, & bee happy! ~~ Susanne Weil, LCBA Secretary
Secretary@lcba.community; 360 880 8130)