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February 2016 LCBA Newsletter

In This Edition:

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

Please contact LCBA Secretary Susanne Weil: susanne.beekeeper@gmail.com or call 360 880 8130

UPCOMING EVENTS:

Above, Gottfried Fritz sharing fresh honey with a young visitor to LBCA's booth at the Spring Youth Fair.

February 14: LCBA Monthly Meeting

PLEASE NOTE – LCBA NOW MEETS ON 2ND THURSDAYS!

When: 6 – 9 p.m.: Social Time 6 to 6:30; Speaker 6:30 to 7:30; Business Meeting, 7:30- 8:45.

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

What: 50 Years in Beekeeping: LCBA Mentor Gottfried Fritz

Gottfried will share his experiences & perspectives on how beekeeping has changed. ***Prefaced by a short film: "The Beekeeper" (10 min.)***

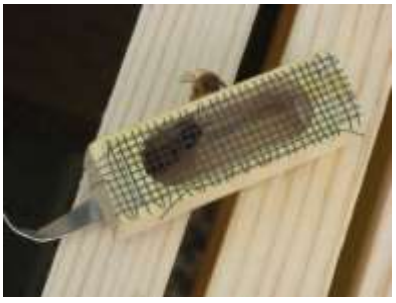
Also: Short business meeting with update on club bee orders & Beekeeping Q&A.
Questions? Contact Susanne.beekeeper@gmail.com or call 360 880 8130.

March 10: LCBA Monthly Meeting

When: 6 – 9 p.m.: Social Time 6 to 6:30; Speaker 6:30 to 7:30; Break & Brief Business Meeting, 7:30- 8:45. ***Bee Orders: 5 to 6 pm in the hallway outside Washington Hall 103.***

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

What: ***Hiving Package Bees, Dos & Don'ts - Dan Maughan; Foundationless Beekeeping: a natural alternative to traditional Langstroth beekeeping - Rick Battin*** • Also: Business meeting & Beekeeping Q&A. Questions? Contact Susanne.beekeeper@gmail.com or call 360 880 8130.



Package Bee Orders & hiving methods will be featured at LCBA's March 10 monthly meeting.

March 29: Beekeeping Orientation for 4th-to 8th Graders at Centralia College

Capitol Region Educational Services District 113 has invited LCBA to participate in a large watershed celebration and workshops for about 350 4-8th graders at Centralia College. LCBA volunteers will offer 2 50-minute classes on honey bee behavior and beekeeping. CRESD says, "All of the students are from the Chehalis Basin Region and would love to learn about bees and their importance to the environment!" If you'd like to help, please contact Susanne.beekeeper@gmail.com.

April 14: LCBA Monthly Meeting

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

Topic: When City Ordinances Forbid Beekeeping – What Can Beekeepers Do? Speaker: Raine Lee Ritalto. . Here in Lewis County, our own city of Chehalis prohibits beekeeping within 300 feet of any structure, effectively outlawing beekeeping in the city limits. This has required one of our 2016 Youth Scholarship students to keep his bees on a family friend's property in another town. Raine is the requestor of Oregon HB2653 Residential Beekeeping; she led the movement that got this bill through Oregon's House of Representatives & will share ideas on working with city governments. **Also:** Short business meeting & "beekeeping Q&A."

SUPER BOWL NOSH ~ HONEY-GLAZED BACON-WRAPPED PINEAPPLE

We 12s may not have a dog in Sunday's hunt, but we can still enjoy honey themed appetizers!

For More Honey-Themed Appetizers, Check Out the National Honey Board Newsletter:
http://us1.campaign-archive2.com/?u=1919ce59c4b8f2ab2df86c158&id=dc702809bb&e=25eb76216e

Preheat oven to 350. Mix half a cup of mayonnaise with 1/3 cup honey & add paprika & sriracha sauce or cayenne pepper to taste. (Spray olive oil in the measuring cup before putting in the honey & it will slide right out). Cut regular sized bacon strips into thirds, wrap around pineapple chunks (blot dry the chunks first), then secure with toothpicks & dip into the sauce. Line the baking dish with foil, then put rack on top & arrange the bacon wrapped pineapple. Baste 'em with the sauce. Bake for about 15 min, baste again, then bake another 10 to 15 (check for bacon done-ness). Then enjoy!

Above, Steve Howard with his best-in-show honey at last summer's Southwest Washington Fair; right, his hand-tooled hinged top bar hive, displayed at our January meeting.

Notes from LCBA's January 14 Monthly Meeting

President Kevin Reichert opened the meeting by noting that 2016 is LCBA's 8th year! Kevin shared the honey almond brickle recipe that he makes for his grandkids to pour over vanilla ice cream: he mixes 2/3 cup honey with 2/3 cup of peanut butter, then puts it in the microwave for 1 minute. You can add the mix to ice cream, though it's also good mixed with 3 - 4 cups of Honey Nut Cheerios: Kevin guarantees that "you will eat them all" and can freeze them, too.

Steve Howard: Building a Top Bar Hive

FYI: those who would like to try to build a top bar hive are welcome to contact Steve for details: sfhoward45@msn.com.

Kevin introduced LCBA mentor Steve Howard to share how he constructed his hinged-top cedar top bar hive. Steve has been a beekeeper for seven years; he joined LCBA when we were a group of 30 to 40 people meeting at the Old Courthouse in Chehalis. (Steve was too modest to say, but he is also a graduate of WSBA's Journeyman beekeeper program.) Steve "started with one hive, but then…..you have lots." He had 16 hives going into fall, including some late swarms and queens who didn't work out, so "you baby them along." Steve ended up with 480 pounds of honey from nine producing hives – to his surprise, he sold all this honey in two months! Long time customers were phoning him wanting more, so he had to dip into his private reserve, then bought five gallons from Harold Weaver at Beeline Apiaries. Even more

people wanted raw local honey, so he bought another five gallons. Altogether, Steve went through 600 pounds of honey this year – even though the nectar flow ended in early/mid-July.

So what does honey have to do with top bar hives? Many of Steve's honey customers were asking for old-school cut-comb honey. He had two pint jars of cut-comb honey from a foundationless frame hive, and people snapped them up. This convinced Steve that now was the time to try a top bar hive: this foundationless beekeeping approach lends itself to harvesting cut-comb. So Steve went online and looked at plans, but didn't think they looked very good or functional. Next, he visited LCBA's former vice president, Dave Gaston, who builds top bar hives and grafts queens, to "pick his brains." Steve also read a book called *Top Bar Beekeeping*: about a third of which actually focuses on top bars (the rest is on basic beekeeping). Steve asked who keeps bees in top bar hives now – about five in our January meeting audience already do; others are thinking about it.

Above left, cut comb honey displayed in bottles– photo by Akarlovic, via Wikimedia Commons, Licensed under CC BY-SA 3.0; right, dark cut-comb honey in the traditional clamshell case for show judging – this was Dave Gaston's dark amber first prize cut comb honey from the 2014 Fair.

Cost considerations: Steve noted that if you want to make your own hive, your most important consideration is functionality: looking pretty is nice, but it has to work. So Steve drew up his own plan and considered the cost. The one he displayed at our meeting was his second try: his first cost $120 of materials, but this one cost just $80 plus his time. For tools, Steve used a skill saw, a drill, brad nailer, sliding compound miter saw, gluing clamps, and a little know-how.

Design challenges: One problem with top bar hives that Steve had observed: the front piece normally is 1 x12, yet you don't buy a 1x12: when you buy the wood, it will be about ¾ in x 11 ¼, and when run it through a planer, it is reduced, so you must keep that in mind – Steve addressed how to deal with this later in his presentation. Second issue: Steve wanted to make his hive out of cedar, whereas many are made of pine. Cedar is a more natural wood. As a retired

forester, Steve has seen many hives in the woods: bees choose cedar, the wood will last, plus cedar is lighter, and its insulation value is higher than pine's.

In design, the front of the top bar is 43 inches: if it is longer, the bees won't cluster right in the hive, and if you do not have a hinged top, it becomes too heavy and cumbersome to lift off, so about 43-44 is the accepted length. Another driver is the top bars themselves: the length of a top bar is same as a Langstroth frame, so you could take a bar and put it into a Langstroth hive and practice foundationless beekeeping there, too. Also, you must consider depth: you want about a 9 inch deep follower board (follower boards are solid boards that act like brackets within the body of the top bar hive and keep the bees contained between them; you add top bars between the leader boards as the colony expands). If the leader board is deeper than that, the comb will be too long and heavy, and it will likely break off when you pull it out to inspect or harvest.

Above left, note the hinge Steve designed to hold the lid up for stability during hive inspections; right, some props: note the leader/follower boards – top right corner of the display table – & Gottfried's demonstraton frames with comb drawn down from the top bars.

Rethinking the hive top: with most top bar hives, you lift the top off to inspect, then put it back. This is cumbersome: Steve wanted to make a top that he could lift and prop up. One great advantage of top bar hives is that you can stop lifting boxes and bending over – a boon for aging backs!

Benefits for the bees: Gottfried Fritz noted that bees tend to be much less agitated when you work them in a top bar. Steve added that top bar hives are more eco-friendly because the bees make their own foundation from their own beeswax, and if you harvest that each year, you are getting honey in fresh comb that has not been contaminated year after year, and there is no issue of replacing plastic foundation every few years.

Using follower boards to keep multiple colonies in one top bar hive: Steve noted that another advantage of the top bar is that leader/follower boards can be used to isolate bees. When you are catching swarms, you run out of woodenware fast. However, you could keep a couple of colonies simultaneously in a top bar box, each colony isolated by a set of leader/follower boards. Steve has made the top bar box so that components fit together snuggly and the bees can't get out (other than through the entrance/exit holes) unless he is lifting out bars. In a photo Steve took of Dave Gaston's hives, the entrance holes to the hive were marked with an x and dots and a circle – these mark entrances for separate colonies housed within the top bar hive. Bees identify with shapes. In another shot that Steve showed, those at the meeting could see the plugs and holes arrangement. Bees can get fussy where they go in.

Ventilating a top bar hive: Kevin asked if Steve put vent holes into the lid. Steve said that he is going to wait until he puts the hive out and then add some on the side of the lid; for now, he drilled screened vent holes on the back side. Kevin wondered if this would be enough for a hot day. You can always drill more holes, keep them plugged, then open them if the weather gets hot. Mel Grigorich said that he connected light chain to corks for plugs. Cody Warren noted that you can put holes in follower boards and screen them to help with ventilation; doing this, he has not had problems. Richard Kain asked whether a screened bottom board is possible with top bar hives: Steve answered that the top bar hive book did not recommend them; Dave Gaston doesn't use them for top bars. For the design he presented at this meeting, Steve let the screened bottom question go since designing the hinged top took time. Steve likes the overlapping top of his hive box and hopes that this will help avoid dampness.

Above left, front view of Steve's top bar hive; right, numbering the top bars helps in management.

Dealing with cross-combing in a top bar hive: Kevin asked how cross comb is handled in a top bar hive: Steve said he has not yet kept bees in a top bar, but assumes you have to take the frame out and straighten out the comb. Gottfried noted that if you manage the bees effectively, there will be little cross combing as they build; they do build little bridges to the side of the hive box, but these are easy to slice through gently. The most important thing to be aware of when you inspect, Gottfried cautioned, is to be careful not to tilt the frames if the wax is soft –

the comb will break off the bar, setting your bees back. When the comb is reinforced and strong, you can tilt a frame, but not at first.

How do you get honey from the comb? Dianne Inmon asked. Steve answered that you cut the comb out of the frame: then, you can mash it (or scrape it with an uncapping fork) and strain it – or you can eat it as cut comb honey – back in the day, people chewed this like gum. With a top bar, you don't need an extractor.

Back to hive design – what about handles? Kevin asked why Steve did not build on handles? Steve said that he can take the legs off for simplicity, but it takes two to move it. However, that's like a normal Langstroth: you can put it on a dolly, strap it in, and move it that way. Ed Carter noted that you do still have to take care not to tilt the hive as you move it so that the comb doesn't shear off.

Constructing the top bar hive: Steve used (a) cedar shingles for his top. He mentioned that you could use corrugated vinyl OR SHEET METAL. To make the front and back, he noted that you cannot buy 1" x 12" cedar, so you need to get two 1" x 6" boards and laminate them together with gluing clamps.

Making the leader & follower bars: Next, you must measure your follower board with great care: these are critical and must be sixty degrees. The top of the leader/follower boards is a one by two strip. Steve did not cut off the ends of the follower boards until he made the box, using the leader/follower boards to help ensure that the angles would be perfect fits so that bees could not get around those boards – see photo below. He used a brad nailer to temporarily nail the sides to the follower board. The final step was putting in the bottom piece of the hive box. He built the legs at an angle of 22 and a half degrees.

Above left, the hive box that Kevin & Steve assembled in front of the meeting – note how the bottoms of the follower & leader boards protrude beyond the bottom of the sides. This was to help insure the angle & fit. The tips were cut off later. Right, Kevin & Steve working on assembly.

Putting the pieces together – a demonstration in real time: Kevin was Steve's guinea pig for assembling the pieces of this top bar hive design, and the two put the parts together in front of our LCBA audience in under ten minutes! Kevin quipped, "Did you ever see a couple of pole oxes put something together? Well, you have now." The follower boards had to come out at the end of the process – they are just used for form, as a guide, and then the bottom tip is sawed off. Everyone appreciated this hands-on presentation!

Terrie Phillips: Starting Top Bar Beekeeping after years with Langstroth Hives

Terrie Phillips started with bees in 2013 after taking LCBA's apprentice class from Bob Harris and Norm Switzler in the fall of 2012; she took the class with her mother, Linda Newton, and then Terrie's daughter, Michaela, got curious about bees: three generations of women in beekeeping! Terrie and Linda are both now members of LCBA's Journeyman study group; Michaela is well-known to LCBA audiences as "Queen Bee" at our workshops and ticket-drawer extraordinaire, helping former president Norm at our fundraising drawings. Terrie got curious about top bar hives and decided to experiment with keeping bees in one last year. To accompany Terrie's slideshow, Gottfried passed around some frames of top bar comb: these came from his hive that didn't make it in Mossyrock. Gottfried also shared a comb out of a brood chamber with very dark wax, which denotes comb that's been re-used many times.

"The Bees Are Coming ~ Early!" When the news came that our bees were coming early last spring, Terrie and Michaela had to leap into action: she bought her top bar hive already made from Beeline Apiaries, then drafted Michaela to give it one fast coat of paint to help preserve the wood (see bee-low). The hive does have a screened bottom board – however, it is long, and she has to take care working with it so that the bees don't come pouring out of the hive. Terrie put a strap around it in the winter to stabilize it, since there's a lot of wind where she lives.

Above left, Michaela painting top bar hive; right, the hive in winter, with a strap around box & lid to protect against wind. In the foreground, a Langstroth hive that Michaela painted in a year when bees didn't arrive early & there was more prep time!

Above left, Michaela with a package queen for the top bar hive; right, hiving the bees in the top bar.

Hiving bees in a top bar: When bee pickup day came, Terrie and Michaela drove down to Centralia from Toutle to collect their Italian package bees from Norm. When they got the bees home, Michaela opened up the package with pliers, then removed the syrup can and got the queen cage out: they saw a really good looking, big queen (see photo above). For the hiving, Terrie consulted the same top bar hive book that Steve did, but it didn't really address any differences in hiving techniques, so she adapted what she does with a Langstroth hive. With a Langstroth, she likes to put the queen on a frame in a hive box, then put the package of bees, opened up, into an empty bottom box – rather than shaking bees out of the package and into the hive box, potentially damaging their feet as they cling to the wire & other body parts as they jostle against each other. This way, the bees can enter the hive at their own pace, which they do readily, since they want to be with their new queen. In a top bar, however, there's no way to provide an empty box to temporarily house the bees in their package beneath hive, so Terrie did have to shake the bees out. However, she took the feeder can and put it on the bottom of the top bar box on top of a couple of wooden strips so the bees could finish it off.

Feeding bees in a top bar hive: Terrie and Michaela had cut a slot into the top bar box so that they could insert a Boardman feeder, thus not having to lift the top and disturb the bees just to check on their food supply. This Boardman strategy worked pretty well: Terrie didn't want to use an in- hive feeder because of the mess it would make. Also, she felt concerned about how to feed the bees in winter: again, the question arose of how to do the things you like to do for your bees in a Langstroth in the top bar hive, with all that space. She has no feed in her top bar now, but when there is a warm enough day, she is going to go in and separate the bars to see where the cluster is, put down hardware wire, and put fondant on top of that to see if the bees

will eat it. Richard Kain said they made a candy board and put it in place of follower board. They are hanging the candy board like a follower board, but with the frame around the candy.

Differences in comb buildup: Kevin asked Terrie if she had observed any difference in the time it took the bees to build comb. Terrie noted that in the top bar hive, the bees built "very fast, almost immediately, a couple lobes of comb" (see photo below). Within 15 days, they had built out three frames. To get them to build, the top bar needs that little jutting runner on the bottom to encourage them to build: Terrie rubbed beeswax on it for further incentive. The top bar hive book said to check every two to three days to avoid cross-combing: however, with her work schedule, she could not get in for a couple weeks, but then saw to her relief that the bees had built straight comb. Then she checkerboarded drawn with undrawn top bars to get them building more and to encourage straight comb – she had only one small cross comb incident. They built fast and seemed to like being in their natural comb. . . .

Above left, fresh lobes of comb drawn by top bar bees; right, Linda holds up a beautiful drawn comb.

. . . That is, until they swarmed. Terrie found the swarm one evening when coming home from work and knew she'd need to re-hive them; since she was tele-working the next day, she decided to leave them overnight, but when she went to get them the next morning, they had left. They left neither honey nor brood behind, but there was a queen. The colony ended up with 12 bars, about one-third of the box.

Langstroth v. Top Bar: Terrie liked not lifting boxes, but she still likes Langstroth hives better, possibly, she thinks, because she found it hard to get used to top bar beekeeping: it gets complex fast, and time is an issue. She is thinking about putting Langstroth hives side by side, drilling openings between the boxes: she saw an article in *Bee Culture* about how to do "Langstroth sideways." Also, she was not able to harvest honey from the top bar hive because of

the swarm. Gottfried said if you take the comb from them in spring after the winter, they have time to build up, and you can harvest then.

Why the top bar experiment? Terrie is a crafter: she wanted to make soaps and try other things with wax, so that is why she started the top bar; she also wanted to see the differences. She wants to try a Warre hive, too, just to see differences and how they work. She'd also like to try a hive with an observation window. She keeps bees mainly for pollination and to help the bee population, not as much for honey.

8 v.s. 10 frame Langstroth hives: Gottfried asked if Terrie had noticed any differences between 8 and 10 frame hives: she says that 8 frame hives build up faster, of course, but they swarm at about same time as ten frames do. Kevin said his understanding is that it is also a commercial issue: you can stack higher with 8 frame hives. Ed asked is there an advantage to the landing strip on Langstroth, as opposed to the hole entries to a top bar. She said it didn't seem different: but then, she had a screened bottom board. The bees seemed ok with their ventilation.

Above left, Michaela with the top bar hive; right, the empty package placed beneath the hive to encourage those last bees to recruit into the box. At the front, if you look closely, you can see mite board inserted.

Digital Hive Scales ~ Dan Maughan

Dan Maughan, LCBA's Community Outreach Coordinator and a member of the Journeyman study group, shared briefly how useful he is finding a digital hive scale. Dan first checked the Mann Lake website . . . where the hive retails new for $3500! Granted, Dan noted, it is a neat scale with a USB port, and it can take data points every 5 minutes, then import them to an Excel file. The 4 stainless steel cells at the ends of the scale, which the hives sit on top of, are key. However, since Dan really did not want to gift Mann Lake with $3500, here's what he did. First, he found a 15 year old heavy duty digital scale: it sold at auction for $134 and works just fine: it measures one-tenth of a pound increments. Dan outfitted it. There is a lot of bling out there that would be neat to use, but not affordable, and, Dan noted, we can make work-around substitutes if we keep our eyes open. His nearly-new scale weighs about 150 pounds.

Kevin asked if Dan has used his scale much: Dan said that he had weighed himself, and it unfortunately got the weight right (Gordon asked how Dan was doing with over-wintering when he weighed himself….). Dan wants to put a hive on it and keep weekly records - maybe even daily - and track weights in different weather and nectar flow conditions, to see how weight fluctuates. Another benefit: he's used a bathroom scale to measure honey, but his nearly-new digital scale is a lot more accurate, which means Dan can be scrupulously honest with customers.

Above, left: Mann Lake's spendy digital hive scale; right, Dan's improvised scale made from used parts.

January 14 Business Meeting Notes:

Treasurer's Report: Treasurer Rick Battin was unable to attend the meeting, but sent his report to Secretary Susanne Weil, who reported that the balance in LCBA's checking account is $3,646.96; the savings (youth scholarship) account balance is $1,958.78.

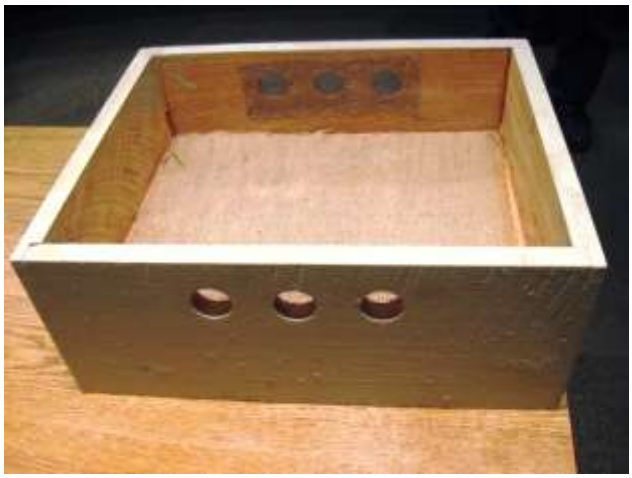
Bee Orders: President Kevin Reichert reported that the board is working with two vendors who have proposed prices for this year's bee order. We will have information about the order – prices, vendor(s), kinds of bees, queens, and roughly when bees would arrive – at our February 11 meeting. As in past years, bee orders will be taken at our March monthly meeting (March 10).

Holiday Potluck: Kevin commented that at a number of people had to leave the potluck early and asked the membership whether a weekend would work better for this coming year. A number of members responded that they would have had conflicts with just about any weekend in December: the holiday season is just jam-packed with events. The consensus seemed to be to keep the potluck on the regular monthly meeting date for December. However, some suggested that the drawing does drag on a little; Kevin noted that the board plans to "bundle" some items to help with timing. Board members thanked the members again for their generous donations to help raise funds for our 2016 Youth Scholarship Program.

Youth Scholarship Program Update: Education Coordinator Peter Glover was home with an injured foot, so Susanne gave the YSP update. Applications closed on January 11; we received two very good completed applications (unfortunately, two applicants whose materials were not complete did not finish the process). The board agreed to award 2016 Youth Scholarships to both applicants – one, Josiah Cowin, is an 11th grade home schooled student in Chehalis, and the

other, Samuel Mittge, is a very eager 5th grader in Napavine. Both are enrolled in LCBA's Apprentice Beekeeping class. Susanne will have profiles with more information on our two youth scholars at a later meeting and looks forward to members' meeting them in person at our workshops this year. She noted that Harold Weaver at Beeline has, for the third year in a row, offered a discount on the equipment list for our scholarship students, helping us cover their needs. The membership gave Harold a round of applause for his support.

Susanne noted that despite outreach that Community Outreach Coordinator Dan Maughan and Peter did with over 200 students – working with the Future Farmers of America advisor in Winlock and biology teacher at Adna - we are baffled that we did not get applicants. Dan noted that the students seemed quite enthusiastic. Terrie commented that the students need parental buy-in to apply and might not have gotten that. Many people who don't know bees are nervous at the idea of having stinging insects around, so outreach to parents is needed, too.



Above, left: a ventilation box made by Mel Grigorich, who donated two of his hand-tooled boxes for our drawing in December; right, Mel shared his box at our show and tell at the meeting & took questions.

Timing certainly was a factor: though we decided to open the application process county-wide after hearing encouragement from members at our November monthly meeting, we acted too late. The board is planning to move the application process for 2017 up earlier, trying outreach to schools earlier in fall 2016, with a pre-Thanksgiving application deadline. It is important to get the students into our beekeeping class in early spring so they are prepared when bees arrive. We can use the Southwest Washington Fair and Spring Youth Fair as outreach opportunities: however, we do not want to just hand out fliers to everyone. We are seeking young people who are truly interested in bees, rather than people seeking free gear; Kevin noted that students now must complete the program to keep the bees and gear. We can also ask members to spread word of the program via word of mouth, and use social media (our Facebook page and website). If we could get a *Chronicle* article covering the program, that would help too.

It was suggested that the application process has a number of forms to fill out and may be too complicated for kids. However, Sharette Giese pointed out that if it is too simple, we may attract kids who want free things and are not willing to work. If they really are interested and committed, they will work on the application and get their parents to help. Phil Wilson

suggested that we try a version of our "Getting Started with Bees" geared for children. Susanne thanked members for the ideas and for their support of the program.

Chehalis limits on urban beekeeping: One of our 2016 Youth Scholars lives within the Chehalis city limits, where an ordinance prohibits keeping bees within 300 feet of any structure. Neither Centralia nor any other city in Lewis County has such restrictions. Our Youth Scholarship student will keep his bees at a family friend's home in Napavine, but it is a shame that he cannot be with his bees on a daily basis, observing their behavior. Kevin reported that the board is planning to approach the Chehalis City Council to see whether this ordinance could be changed. Susanne noted that Raine Lee Ritalto, an Oregon beekeeper, has worked with Portland and other cities to change their restrictions and suggested that we get her to speak to the club if members are interested – there was interest in this. More news as it happens. . . .

Swarm & Colony Removal Policy Changes: Kevin noted that a board subcommittee has been looking at the colony removal program in terms of liability and other issues; they have sent suggested changes via email to those on the colony removal list. Kevin will bring an update and some changes to the membership at the February 11 monthly meeting.

Call for Mason Bee Blocks for Gardening For Everyone, Feb 27: Kimo Thielges reminded us that he needs mason bee blocks for his display and free give-away at Gardening For Everyone. Blocks with mason bees or new blocks are both welcome. If you are interested and have questions, please contact Susanne or email Kimo at kimosabe@compprime.com.

Beekeeping Q&A: Bees are now flying on warm-ish days and that members who feed may want to check on whether bees need more hard candy. Kevin asked if anyone had gotten into their bees. A number of members had checked, and there were questions about how many dead bees in the hive entrance and bottom board is normal for this time of year. Kevin noted that we have to remember: bees who over-winter with the queen will be coming to the end of their life, so some dead bees are normal to see. Kevin noted that if you are checking your bees, be sure to zip up your jacket; don't ask how he knows this…. Kevin also asked if members who had checked their bees were seeing moisture problems; those who have been using the vent box have not. Kevin reminded us that changing the chips is important once they have gotten damp.

Above, mite on bee foraging on lavender (mite is just below wings) – Kathy Keatley Garvey, UC Davis

Several members have tried oxalic acid for mite control. Mel Grigorich got the key part at Pilot Truck Stop in Olympia for just $14. He has used his newly made vaporizer and said that dead mites dropped all over the slider board "like pepper" afterward. He's used oxalic three times about 5 to 7 days apart. Dan Maughan noted that he had seen a drop in the circle below where the oxalic acid vaporizer was inserted, but not below the cluster of bees.

BEES IN THE NEWS

Thanks to Fran Bach, Steve Norton, & the folks at Bee Culture, American Bee Journal, & WSBA for bee news stories. Please keep 'em coming!

"EPA Releases the First of Four Preliminary Risk Assessments for Insecticides Potentially Harmful to Bees: First-of-its-kind assessment delivers on President Obama's National Pollinator Strategy" 6 Jan 2016, American Bee Journal

In a "preliminary pollinator risk," the EPA acknowledged that imidacloprid, one of the most widely used neonicotinoid pesticides, "potentially poses risk to hives when the pesticide comes in contact with certain crops that attract pollinators." Jim Jones, Assistant Administrator of the Office of Chemical Safety and Pollution Prevention, said that this testing showed EPA's commitment "not only to protecting bees and reversing bee loss, but for the first time assessing the health of the colony for the neonicotinoid pesticides." The EPA partnered with Canada's Pest Management Regulatory Agency to conduct the risk assessement.

A "residue level" of 25 ppb is the "threshold above which effects on pollinator hives are likely to be seen, and at that level and below which effects are unlikely. These effects include decreases in pollinators as well as less honey produced." The study shows that certain crops, such as cotton and citrus fruits, "may have residues of the pesticide in pollen and nectar above the threshold level."

The EPA is conducting risk assessments for clothianidin, thiamethoxam, and dinotefuran: these "are scheduled to be released for public comment in December 2016."

The risk assessment for imidacloprid can be viewed at: http://www.regulations.gov/#!docketBrowser;rpp=25;so=DESC;sb=postedDate;po=0;dct=SR;D=EPA-HQ-OPP-2008-0844 . EPA will offer a webinar on its imidacloprid study in February 2016: for dates and details, visit: http://www.epa.gov/pollinator-protection/how-we-assess-risks-pollinators

"Bayer Revises Position to Propose Extra Protections for Bees from Pesticides": 17 Jan 2016 Bee Culture

After arguing that EPA had "overestimated" the impact of imidacloprid in the above risk assessment, Bayer has acknowledged that the EPA's study is "scientifically sound." Bayer plans to work with EPA on the ongoing project. Bayer's spokesman said, "EPA concluded that when used on citrus and cotton imidacloprid might pose a risk. Note that they didn't say they are a risk to honey bee colonies," noting that farmers can apply imidacloprid more safely to these crops.

Bee Culture noted that "two studies published in Nature last year cited evidence that overuse of neonicotinoid pesticides was harming bee populations. One of the studies found that bees were drawn to neonicotinoids, which are derived from nicotine, possibly similarly to how humans are attracted to nicotine. This means that bees may prefer a food source that harms their nervous system."

Meanwhile, The Center for Food Safety is suing the EPA for "allowing seeds coated in neonicotinoids to be planted across 150m acres of US soil each year without proper assessments

of the impact. Seeds coated in pesticides were not within the scope of the EPA study released last week."

To read more, visit: http://www.beeculture.com/catch-the-buzz-bayer-revises-position-to-propose-extra-protections-for-bees-from-pesticides/?utm_source=Catch+The+Buzz&utm_campaign=e176aafb10-Catch_The_Buzz_4_29_2015&utm_medium=email&utm_term=0_0272f190ab-e176aafb10-256261065

"How Queen Bees Control the Princesses. Queen Bees and Ants Emit a Chemical That Actually Alters the DNA of Their Daughters and Keeps Them Sterile and Industrious Workers": 30 Jan 2016, Bee Culture

We already knew that the queens of ant and bee colonies reproduce prolifically and live many years beyond their offspring; now, a new study from the Australian National University has discovered that honey bees and ants have something else in common: queens of both species secrete a pheromone "that alters the DNA of their daughters and keeps them as sterile and industrious workers." When that queen substance pheromone is absent, "worker bees and ants become more self-centred and lazy, and they begin to lay eggs," according to lead researcher, Dr. Luke Holman.

The startling finding is that the queen pheromone actually changes the genes of workers chemically. "Recent research suggests that a chemical modification to a baby bee or ant's DNA, called DNA methylation, helps determine whether the baby develops into a queen or a worker." The new study shows that "workers exposed to pheromones tag their DNA with methylation differently, which might suppress queenly characteristics in the workers." In bees, the queen pheromone lowers this methylation, but in ants, it raises it. "Bees and ants evolved their two-tier societies independently. It would be confusing but cool if they had evolved different means to the same end," Dr Holman said.

The next stage of the research will examine Australian bees, "which evolved sociality independently from the European species." To read more, visit;

http://www.beeculture.com/catch-the-buzz-how-queen-bees-control-the-princesses-queen-bees-and-ants-emit-a-chemical-that-actually-alters-the-dna-of-their-daughters-and-keeps-them-sterile-and-industrious-workers/?utm_source=Catch+The+Buzz&utm_campaign=20798e7e13-Catch_The_Buzz_4_29_2015&utm_medium=email&utm_term=0_0272f190ab-20798e7e13-256261065

"Sunspot Activity Affects Bees' Navigation": [Fran Bach's Items of Interest for Beekeepers]

When sunspots disturb magnetic fields, this can disrupt magnetoreceptors in bees, making it harder for bees to "identify their position" and causing fewer foragers to navigate home, according to a new study in the Journal of Apicultural Research. The study suggests that "this disruption may be so severe that the flying bees disappear from their hive and that these losses may contribute to colony failure." The farther bees get from home, the more they seem to rely on magnetoreception. "Their homing ability also seems to be affected by uncontrolled, natural fluctuations in the Earth's magnetosphere. The study links documented periods of increased

levels of solar storms and disruption to the magnetosphere to increased levels of honey bee colony loss."

To read more, visit: http://www.ibrabee.org.uk/news/press-releases/3707-press-release-sunspot-activity-affects-honey-bees-ability-to-find-their-way-home. For the actual research study, "Magnets, magnetic field fluctuations and geomagnetic disturbances impair the homing ability of honey bees (Apis mellifera)," visit: http://www.ibrabee.org.uk/index.php/component/k2/item/3598

"New Honey Bee Gene Bank" [Fran Bach's Items of Interest for Beekeepers]

The Agricultural Research Service is developing a honey bee gene bank, using cryopreserved (frozen) seen. This gene bank, to be based in Fort Collins, Colorado, will focus on protecting "genetic diversity . . . especially for traits such as resistance to pests or diseases and pollination efficiency." WSU and the ARS Honey Bee Breeding, Genetics, and Physiology Research Unit in Louisiana will work together on the project. First up for preservation: Russian and Varroa Sensitive Hygiene lines. The researchers are working to improve not only storage, but how to "reliably revive frozen embryos and grow them into reproductively viable adults after storage."

To read more, visit: http://seedworld.com/new-ars-bee-gene-bank-will-preserve-genetic-diversity-provide-breeding-resources/

Australian blue-banded bee has been captured using its unique pollination method for the first time (Nathan Rupert/Flickr)

"Headbanging Aussie bee takes a heavy metal approach to pollination": 14 Dec 2015, Science Daily

Australia's native blue-banded bee "has been filmed head banging flowers up to 350 times a second" in newly discovered twist on buzz pollination: "the technique causes vibrations that release pollen into the air similar to the motion of a salt and pepper shaker, helping pollinate the flower." Scientists working on crop pollination efficiency – as well as those working on "understanding muscular stress and the development of miniature flying robots" – are studying the blue-banded bee. The study showed that whereas bumblebees use their mandibles to stabilize plant anthers before buzz-pollinating, slow-motion film revealed the blue-banded bees' "hands-free" approach. "[B]y recording the audio frequency and duration of the bees' buzz, [scientists] were able to prove the Aussie bee vibrates the flower at a higher frequency than

overseas bees and spend less time per flower." Australian tomato farmers now may not need to import bumblebees for their greenhouses – they can use local talent.

To read more, visit: http://www.sciencedaily.com/releases/2015/12/151214092726.htm For video see: http://www.livescience.com/53127-australian-bee-pollinates-by-headbanging.html

ANNOUNCEMENTS

Registering Your Hives with WSDA – 'tis the season: If you register your hives with the state, you're not only complying with the law, but supporting bee research at WSU. Also, if state or county agencies are planning to spray near registered beekeepers, they are directed to contact beekeepers beforehand so we can screen entrances & keep bees inside for the duration. It'll be interesting to see how this new program works. To register your hives, download the PDF at: http://agr.wa.gov/PlantsInsects/Apiary/docs/2016ApiaryRegistration.pdf Hive registration costs: 1 to 5 colonies, $5; 6-25 colonies, $10; 26-100 colonies, $25 [More hives? See WSDA's form].

April 29 – May 1: Spring Youth Fair: LCBA will have a booth at the Spring Youth Fair again this year. We're hoping to reach out to possible 2017 Youth Scholarship students. If you would like to volunteer to "talk bees" with young people or have gear to loan, please contact Susanne (Susanne.beekeeper@gmail.com).

Got Clay Soil? An LCBA Member is looking and would like to get a couple of truck bed loads. If you can help, please contact Kaylene Tate: kaylenet@fairpoint.net .

New Photo Contest Coming To Bee Culture's Web Page! - To start the year out right, Bee Culture Magazine will be featuring a photo contest each month, beginning Jan. 4, 2016. There's a different theme every month (January's theme is winter beeyards), and you can enter with your own photos! Best of all, you get to vote for the best photo each month. The photo that gathers the most votes wins a full free year of Bee Culture's Digital Magazine! (Why not get your friends to help?)

But wait, there's more! Each month the editorial staff at Bee Culture will pick their favorite for the month, and the photographer chosen will receive a free copy of the 41st edition of The ABC & XYZ of Bee Culture! So get out those cameras, go visit a snowy, cold or winter beeyard and snap away. A prize is waiting for you!

For details, visit: http://www.beeculture.com/catch-the-buzz-new-photo-contest-coming-to-bee-cultures-web-page

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 (Susanne.beekeeper@gmail.com; 360 880 8130)**