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March 2017 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



Above, Package Bees awaiting pickup at Beeline Apiaries, April 2016; right, Community Outreach Coordinator Bill Barr hiving his nucleus bees, April 2016

THURSDAY, MARCH 9: LCBA Monthly Meeting

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

When: 6 – 7 p.m.: Package Bee Sales

7 – 8 p.m.: Speakers: Bill Barr, LCBA Community Outreach Coordinator, & Peggy Hammer will speak about their first year as beekeepers – what they learned & what tips they would offer to first year beekeepers.

8 – 8:45 p.m.: Beekeeping Q&A & Monthly Business Meeting



THURSDAY, APRIL 13: LCBA Monthly Meeting

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

When: 6 – 6:30 p.m.: Social Time

6:30 – 7:30 p.m.: Speakers: LCBA President Kevin Reichert & Mentorship Coordinator Dan Maughan will speak on spring management strategies & techniques. How are your bees doing coming out of winter, and what can you do to help them be ready for the nectar flow? For new beekeepers, some tips on hiving package bees.

7:45 – 8:45 p.m.: Beekeeping Q&A & Monthly Business Meeting

**SPECIAL EVENTS: FREE WORKSHOPS
IN GARDENING SUPPORT FROM LEWIS COUNTY EXTENSION**

Many beekeepers garden to help support their bees, or have bees to support their gardens – or both! Either way, these FREE workshops may be of interest to you. . . .



Above left, blueberry bush, photo Lynn Ketcham, OSU Extension; PAIS tomatoes, right.

March 11: Blueberry Care: Selection, care, & hands-on pruning of blueberry bushes in the PNW. **When:** 10 a.m. to noon; **Where:** Providence Place Demonstration Garden, 350 S.E. Washington Avenue, Chehalis WA 98532.

March 15: Know Your Soils: If you want to grow better plants, you first need to understand the texture of your soil. Collect and bring in a sample of your soil and learn how to test for pH, nitrogen, phosphorus, potassium. **Important: call 360 740 1216 to pre-register in advance. You will need directions on how to prepare your soil sample.** **When:** 6 – 8 p.m.; **Where:** Fort Borst Park, Kitchen #1, Centralia WA 98531.

March 18: Growing Tomatoes: Understand different types of tomatoes and how to grow them in the PNW. **When:** 10 – 11 a.m. **Where:** Salkum Timberland Library Demonstration Garden, 2480 U.S. Highway 12, Salkum, WA 98582.

March 25: Soil Health: What kind of soil do you have? How to amend and add nutrients and how to build up your soil to grow your favorite plants. **When:** 10 a.m. to noon; **Where:** Fort Borst Park Demonstration Garden, Centralia, WA 98531.

March 29: Recycling Dos, Don'ts, & How to Recycle: Can I Recycle This Or That? Bring your questions to LC recycling experts for a Q&A session. Learn how to make non-toxic cleaning recipes. **When:** 6 to 8 p.m. **Where:** Chehalis Historic Courthouse, basement meeting room, 351 N.W. North St., Chehalis WA 98532.

PACKAGE & NUC BEE ORDER INFORMATION

LCBA Bee Orders 2017 – Vendor, Beeline Apiaries



What You Can Order: Kinds, Quantities, Prices

3 pound packages: Specify Italians or Carniolans; mated queen: \$110.06 /package [incl. tax; \$102 with proof of 2017 WA hive registration]. *FYI: 3 pound Carni packages will be coming in from a different vendor, so their pickup date may be different from the rest of the bee order. We'll send details as we have them.*

4 pound packages: Specify Italians or Carniolans; mated queen: \$130.56 / package [includes tax; \$121 with proof of 2017 WA hive registration]

Individual Mated Queens: Italians or Carniolans - \$35.61 [includes tax; \$33 with proof of 2017 WA hive registration].

Nucs [established colonies that include a mated, laying queen]: Carniolans or Italians, 5 frames in cardboard package: \$145.66 [includes tax; \$135 with proof of 2017 WA hive registration]

FYI, LCBA does not warrant and cannot guarantee the quality of bees ordered.

Important Order Details

Where & When: Orders will be taken at LCBA's March 9 meeting, 6 to 7 p.m., in the hallway outside Washington Hall 103 on the Centralia College Campus.

To order bees through LCBA, one must be a member current on dues. Membership forms are available on our website (lewiscountybeekeepers.org – click on the “Membership” link on the home page).

Order Forms: Please print out & fill out the bee order form which has been emailed to everyone on the LCBA mailing list, as well as the membership form if you have not yet paid 2017 dues, before the March 9 meeting: Last year, our order line moved slowly because folks had to fill out all those details at the tables. If you bring your paperwork all filled out, it will go much faster! We will have some blank order and membership forms at the “Questions” table, but if you can, please bring your printouts ready to go – thank you!

If you cannot attend the March 9 meeting, you may drop off your order form, payment (and membership form and payment if needed) to LCBA Secretary Susanne Weil – please call 360 880 8130 to arrange this. It is too late for mailing to ensure on-time arrival

FYI: The bulk bee order is a pass-through; LCBA does not mark up the vendor's prices and does not profit from the sale.

Hive Registration & Tax Exemption: To register your hives with Washington State, go to the WSDA website: <http://agr.wa.gov/FP/Forms/PP/docs/6116-Beekeeper-BrokerRegistration.pdf> . Cost of registration is \$5 for 1 to 5 colonies, \$10 for 6 to 25 colonies (see form for costs for apiaries with over 25 colonies).

To get the tax exemption, our vendor must have proof of your hive registration – that is, your hive registration number – when you pay for your bees. WSDA is not very speedy getting even email confirmation back to beekeepers. One LCBA board member registered hives in February, and it took 9 full days for the email with our registration number to arrive. Since LCBA's order date is March 9, if you want to register, it would be a good idea to register your hives right away and to pay WSDA by check, write "hive registration" and the number of hives on the memo line, then bring a copy of your check to the meeting; even better, if the check has cleared, a photocopy of the canceled check would enable you to get the tax exemption.

FYI: Beekeepers are required by law to register their hives. WSDA's deadline for 2017 hive registration is April 30. Although there is no longer a Washington State Apiarist to provide support to beekeepers, part of the hive registration fee goes to support honey bee research and the diagnostic lab at WSU. Also, beekeepers who register hives will be notified by the state of any pesticide spraying near their apiaries.

Bee Pickup Place: Beeline Apiaries, 19019 Moon Road SW, Rochester 98579 [off Hwy 12];

Delivery Date: Will probably be sometime in mid-April – we will send an email to those who order as soon as we know the date. It may be short notice, as much depends on weather in California, where the bees will be transported from. Please prepare to be flexible – bees must be picked up on the delivery date and hived promptly. If necessary, you can make arrangements for a family member or friend to pick up your bees; if you need to do this, please email secretary@lcba.community with the name of your designee.

Mentoring: LCBA will have a popup tent at Beeline on delivery day with mentors & info handouts to help new or nearly-new beekeepers; also mini marshmallows for queen hiving. For a detailed handout on how to hive your package bees, visit LCBA's website: http://lewiscountybeekeepers.org/mentorsworkshopsclasses/hiving_package_bees .



2016 Package Box Return & Refund: If you ordered package bees last year through LCBA and kept your package box (and it is in reasonably good shape), you can bring it back to Beeline for a modest refund (in the past it was about 3 or 4 dollars). This would be turned in to Harold at Beeline on bee pickup day, not to the LCBA "mentor tent." Above, mentor Gottfried helping out on 2016 bee pickup day (photos by Brian Mittge).

THURSDAY, FEBRUARY 9 ~ LCBA Monthly Meeting Notes:
New Long Langstroth & Observation Hive Designs – John Edwards, Brushy Mountain Bee Farm



Above, John Edwards of Brushy Mountain Bee Farm in Wilsonville, Oregon, formerly Ruhl Bee Supply, demonstrating his new, portable observation hive at LCBA's February 9 meeting.

President Kevin Reichert announced that longtime beekeeper and LCBA mentor Grant Inmon had just had open heart surgery and was on his way home for recovery. We passed around a get well card for Grant.

Kevin introduced John Edwards of Ruhl Bee Supply in Wilsonville, Oregon, now a division of Brushy Mountain Bee Farm. John donated three bucket feeders for LCBA's Youth Scholarship program, as well as three-zip on veils – much appreciated! Vice President Bob Harris noted that John has just finished a book on the long hive, and we will be getting a copy for our club library.

The new face of Brushy Mountain in Wilsonville, Oregon: John began by noting that Ruhl Bee Supply has expanded with many new events ahead. "Scientific Beekeeping" writer Randy Oliver will be coming to speak. They now have a bee yard on site at their new warehouse location in Wilsonville, where they do a lot of own manufacturing: they sew clothing and work in a huge wood and metal shop. (To see more of what Ruhl offers, visit: <http://www.ruhlbeesupply.com/index.html>.)

Long Hive Beekeeping is an ancient idea which has been revisited in the Pacific Northwest as top bar, or Kenyan hive, beekeeping. Viewed by some as a more natural method of beekeeping than the Langstroth, the long hive has gained popularity, so John decided to learn more about it. He has had a number of frustrations with both top bar and Langstroth hives and wondered whether the long hive might blend the best features of both without their drawbacks.

John noted that whereas the Langstroth hive format dates back about 150 years, long hives go back much further. In ancient Egypt, clay long hives were floated down the Nile - the first recorded migratory beekeeping! Although they could not have done much management, we should not assume the method was ineffective. Some Ph.D.s with experience in beekeeping say that it isn't possible to succeed with bees in long hives; however, John's own experience has been successful.

For a thousand years, African beekeepers have kept bees in long hives: log hives with their core chopped out. The combs were fixed, attached to the top of hive much like in a skep. Management methods are necessarily different than in a top bar. The Canadian government undertook a project via the University of Guelph in 1971: they attempted to shift Kenyan beekeepers to movable comb hives, but Kenyans were not interested, so they devised a modified long hive that Kenyans would work with.

This accessorized Kenya hive, “blinged to make it usable,” is more complex and expensive to produce, and still comes with many constraints. Because there is no space between the top bars, you cannot see into the hive from above and must invade to see if comb has been built: for this reason, they built an observation window. Then, holes were drilled in the side to help with ventilation. Kenya hives also get mold, so they made a moisture ventilating lid to do what an inner/telescoping cover would do.

John commented that at this point, you have to start asking yourself: why do this? Why not go back to Langstroth hives? The Kenya hive and VW bus have a lot in common, John quipped: limited practicality, vintage (hippie), cool, so much fun, and can be improved - for a price.

More Long Hive History: The Dartington hive from 1970s Britain became popular when its inventor tried to keep bees on rooftops in London. It is a horizontal hive at bench height, so easier on one’s back. It uses small honey supers with a focus on avoiding lifting. Cabinet hives in eastern Europe, also known as “chest hives,” were a mainstay in the old Soviet bloc. These hives are long and deep and very heavy. They look like Langstroths from the outside, but they are deeper and operate horizontally like a top bar.

The Long Hive A La Ruhl’s: John displayed two long hives at bench height. In terms of volume and bee holding capacity, they are the equivalent of two side by side Langstroth hive deep boxes with the central sides pulled out. Dan asked whether honey supers can be placed on top: John said that they could.

An advantage of this new design is that just by opening the lid, the beekeeper can pretty well tell how many frames have been drawn. John feels that this makes for less intrusive hive inspections. There are no worries about splitting boxes apart and separating comb just to see what is going on below: John commented that with a standard Langstroth hive, once you separate boxes, if it looks good, you wish you hadn’t done it and destroyed brood stuck between combs, and killed some bees. On the other hand, with a Langstroth, if you didn’t separate the boxes, you would not know if the bottom box might be empty and your colony might actually be going backwards.

John suggested that we think of bee trees and why they make a great environment for bees: the colony can work its way up or down, as bees choose, like in a Warre hive. With the long hive, we are trying to force them to go left and right: does that work? John noted that history says yes.

Details of the Long Hive Design: In the Ruhl long hive, the main chamber distributes comb differently – horizontally rather than vertically – but it holds the same number of frames as in two vertically stacked Langstroth hive boxes. The main entrance to the hive is at the base of the box. You could choose to go foundationless, simply using top bars: if you do this, bees will taper the comb as in a top bar hive. To super for honey, you can place Vivaldi boards between the telescoping lid and honey supers, with queen excluders below the supers (if you use excluders).

Swarming in the Long Hive? Dan asked whether John finds the bees more or less likely to swarm in a long hive. John said that he could answer in two ways. First, is the long hive

fundamentally better on average? He has seen no difference in terms of survival or honey producing performance. He has quite a few of these hives and has seen less swarming, but he has no explanation for this.

Kevin suggested that possibly the bees feeling they have enough room could be the answer. Gottfried Fritz suggested that the bees may not have to worry as much about food in winter or early spring, particularly if honey supers are left on top of the long hive for easy vertical access by the bees; the beekeeper could then harvest honey in spring after wintering. John noted though that it is important for the cluster to have some food in center because sometimes the bees won't move over. Dan noted that one could keep two small separate colonies in a long hive using division boards. John displayed the division board for the long hive: it is like a follower board in a Kenya or long hive.



Above left, what you see looking down into the long hive; right, division boards in the long hive. Thanks to Phil Wilson for taking photos of John's slideshow.

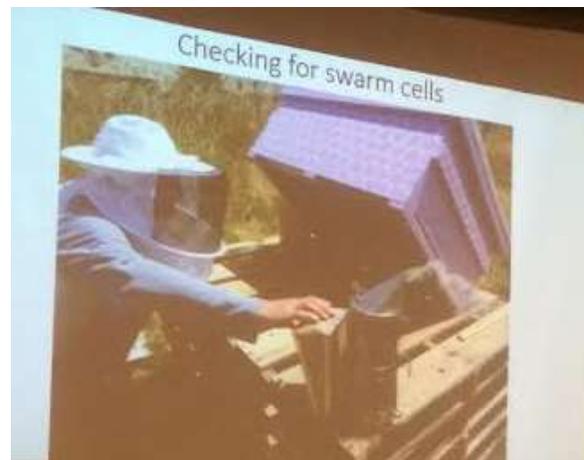
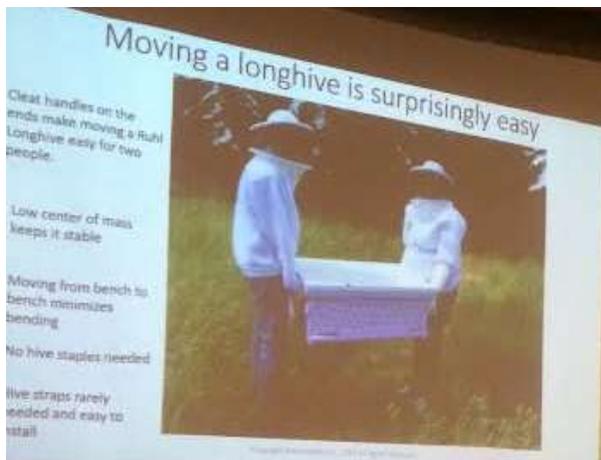
Managing Bees in a Long Hive: John has found long hive beekeeping much easier on his back than doing so in Langstroth hives. He also finds this type of hive easier to inspect, easier to treat, easier to move, and more flexible in terms of options for managing the bees (see comments above). The hive box is double thickness, front and back. Management tools include a division board; a middle queen excluder board if you want to use it; and also a double screen board which can be useful in combining colonies.

Flexible management: Division boards can be used to install package bees in a long hive: you can put insulation in one half of box, fill the rest with about 10 frames, and then, as the bees fill out the frames, remove the insulation. John was asked: why not let them just have the whole box from the start? John thinks that bees prefer a more confined space into which they expand gradually. Also, you can use the division boards to install a nuc, even two nucs, and maintain two colonies in the long hive, with separate entrances to reduce drift. If one colony doesn't make it, then you don't have to re-queen: you can simply combine. John finds there is a non-linear relationship between the number of bees and the success of colonies: more bees makes a more successful colony and offer more options, such as to split later.

Feeding in the Long Hive: John uses a Swienty tray feeder; there is also a Brushy Mountain tray feeder. You can also use Boardman entrance feeders. There is also an option for a top feeder for feeding drivert sugar in winter, as well as a moisture control box using standard Langstroth shallows.

Moving a Long Hive is surprisingly easy: the Ruhl model has cleat handles on each end, making it simple for two people to move. The long hive's low center of mass keeps it stable. No hive staples are needed; hive straps are rarely needed, but are easy to install. John said he has actually moved a long hive by himself: it can be done! Kevin quipped, "You may not walk tomorrow, but you can do it." John replied that he would not even attempt to move two Langstroth hive boxes at once, but the long hive has the same volume.

Graduated Hive Inspections in Long Hives vs Stacked Hives: John explained that he sees three different levels of hive inspection: external inspection vs hive-top inspection vs frame inspection. He calls these levels 1, 2, 3. #1, the external, is most frequent and least disruptive; level 2, the hive-top inspection, is less frequent and more disruptive; level 3, frame inspection, is the least frequent but most disruptive. With a long hive, however, even when you pull frames, there is no pulling boxes apart from each other. If you are treating for mites in a long hive, you don't need to break apart boxes. It is a good idea to keep records, particularly if you are maintaining two colonies in the long hive, separated by division board. John noted that #2, the top inspection method, gives a more holistic view of the colony: the entire brood nest is visible. If the colony is small, you can use the extra space in the long hive to hang frames: as you separate them for inspection, you can put on other side of division board.



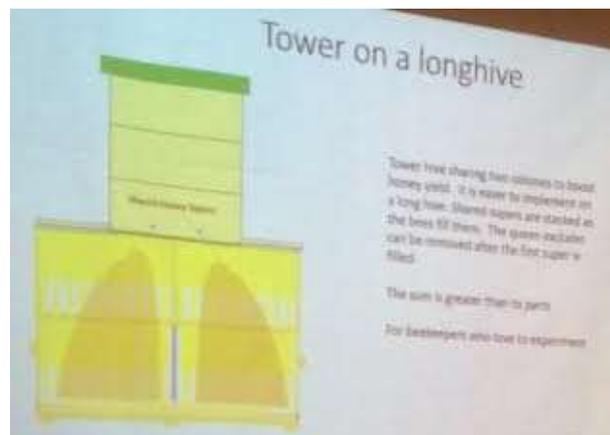
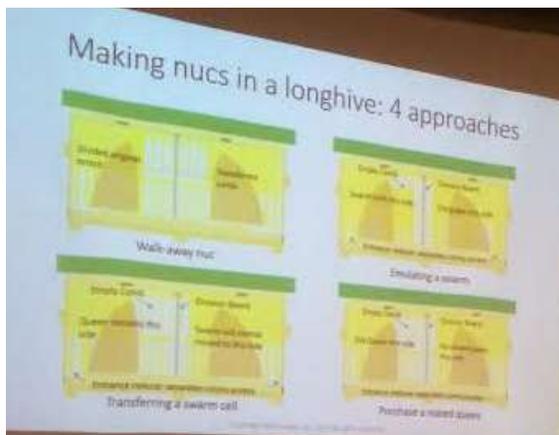
Checking for Swarm Cells: John showed a slide in which he was tipping the whole long box and propping it up: that enabled him to see the bottoms of frames without pulling them.

Making Nucs in a Long Hive: John explained four approaches. First, you can divide the original brood on one side of the division board and transfer some brood comb to the other: this is a walk away nuc in a long hive. Second, you can emulate a swarm by putting empty comb and swarm cells on one side of the division board, the old queen on some brood frames on the other side of the division board, with an entrance reducer separating colony access. Third, you can transfer a swarm call: put the division board in the middle of the long hive, put the queen and brood and bees on one side of the division board, and then move the comb with swarm cells to the other side. Fourth, you can purchase a mated queen and use the division board to separate the new and old queens.

Dartington Management Cycle: The goal of this management cycle, which runs through the seasons, is to maximize honey production. In winter, the cluster is in one side of the long hive,

and the beekeeper puts insulation in the other side. In late winter, as the brood expands, you give less insulation and move the division board over to create more room. In early spring, you do brood division with swarm cells on one side and the old queen on the other side to satisfy the bees' natural swarm impulse. In spring, you can remove the old queen and recombine colonies. In summer, you allow regular expansion; then, in autumn, you consolidate.

However, Don't Split a First Year Colony: Kevin said one should never split first year bees and asked John to speak to new beekeepers in the audience about this. John noted how intense the cycle of that first comb-drawing in spring is: it takes a lot of energy for the bees to make all that wax and draw the comb. The beekeeper must inspect and see they are ok; if you split the colony, you will interrupt that drawing, so it is not prudent to split your developing colony.



Above left, diagrams of making nucs in a long hive; right, honey supering tower on long hive (photos from John Edwards' slideshow, shared by Phil Wilson)

Honey Production in Long Hive. Beekeepers can harvest honey entirely in the long hive, or they can put supers on top of the long hive. You can center supers on top of the box with two colonies below, both using the shared supers. If you super within the box and put in a queen excluder, the brood will expand on the one side only, and may not have enough stores for winter. If you take this approach, you will need to harvest relatively early to give the bees time to build up winter stores. Dan thought there might be a risk of the bees getting honey-bound during a big nectar flow, creating a swarm risk. Bob noted, though, that with easier inspection, there would be a better chance of catching that before it becomes a problem.

John noted that if you have two colonies sharing the super, then the best way is to place a tower of supers on top of the long hive (not one shared super plus two side mini supers). For this, John uses two deep boxes on top of the long hive. Bob noted, and John agreed, that this defeats the purpose of the simplicity of the long hive: it is easier to use shared supers, stacked as bees fill them. The queen excluder should be removed after first super is filled. The sum is greater than its parts, John said.

Cody Warren asked if you could run a longer box: Cody runs 36 frames in top bar hives. John said that that approach is fine, with an option for multiple colonies. John asked Cody if his queens are hard to find; Cody said that, no, the bees push her more toward the entrances. Cody has entrances on opposite ends of his top bar boxes, which John thought was great.

Re-queening in a Long Hive: One common driver of a re-queening failure is laying workers (an almost hopeless situation). Another is too-quick introduction: don't uncork the queen cage too soon; use an introductory queen cage or introducing frame. Another is no brood: in this case, you can introduce some brood from another colony to improve queen acceptance. Still another is a poorly mated queen: early-emerging queens may have a higher risk of poor mating if enough drones are not available. Still another issue is seasonality: spring is easier than late autumn for raising a new queen. Typically, you want two solid weeks of 70+ degree weather for drone flights and mating before rearing queens. Experienced beekeepers tend to avoid the earliest available queens for that reason. One other issue is queen origin: a queen from Texas may not do so well in Washington. On the other hand, John knows a queen supplier in Canada who is a scientist hybridizing Russians and Caucasians: these are the "Saskatran queens." Cody has heard of this: LCBA members who are interested can check with him.

The New Brushy Mountain Observation Hive: The long hive was not the only new method John displayed at the meeting: he also showed us the Ulster observation hive, which is one frame taken from the bottom box of a nuc hive, which is the bottom box of this observation hive; the queen frame is pulled out of the bottom nuc box and put in the upper observation window. The Ulster design has a built-in queen excluder so that the support bees can come up, but she can't go down, and observers will be able to see the queen. The Ulster is also lighter to carry than a multiple display frame observation hive. Dan noted that LCBA could use this at the Southwest Washington Fair. Kevin asked how ventilation works in this observation hive design: John noted that you could put screened holes in to help. Also, you can put in a frame feeder to feed bees and make it a 4 frame nuc to keep down the number and volume of bees, making cooling easier for the bees to manage.



Above, new Ulster Observation Hive (from Ruhl Bee Supply's website)

New Mite Testing Gear: John asked how many in the audience test for mites (most do). He brought a special bottle for testing using either a sugar shake or alcohol wash: the jar has a line like in a Pyrex measuring jar. When you have enough, say 300 bees, you can add the alcohol and then the mites wash down through the screen into the lower can: you can then easily count the mites. However, John says that he likes to use the old sticky board method: "if I find one mite,

I'm going to treat." He noted that sugar dusting to knock down mites is easier in the long hive than in a Langstroth. Dan asked what John's preferred method of treatment is: John said that he thinks thymol works very well. John also sees the value of oxalic, but notes that one must watch out doing the vaporizing. He prefers the drizzle as a way of avoiding possibly breathing in the fumes. Also, John thinks that formic acid is good: it burns the mites, but less so the bees.

Finally, John showed a fascinating device to pump carbon dioxide into the same mite-testing jar as above: just as with sugar shaking, it gets mites off the bees without killing them – the bees wake up in about ten minutes.

Some Recommended Reading: John highly recommends Tom Seeley's book *Honeybee Democracy*, which explores bees' decision making when they seek a new hive. Bob Harris said that he is buying a copy for LCBA's library. John noted Seeley's new book and experiment, "Bee Lining": how to hunt bee colonies in the woods. Seeley has developed new technique via experiment. Based on Seeley's work, John has made a bee lining box: with the right method and tools, you can do your own "bee lining."

February Business Meeting Notes

Audit Committee: Steve Grega reported that he and William Pittman, LCBA's audit committee, reviewed the books for 2016 with Treasurer Rick Battin and found no problems. LCBA writes relatively few checks and all outgoes were accounted for. No unrelated expenses were charged. One check written by LCBA was not cashed: it was a refund of membership, and that check now is no longer valid. A little extra money in the account came from extra change from bee orders (LCBA had asked for exact change on bee order day, and some members donated the change). The bee order in March was the biggest item, but was just a pass-through to the vendor, Beeline Apiaries, with no profit to the club.

Steve noted that the membership account should be easier to track this year since now LCBA has one amount uniform for all memberships. The ending balance for 2016 was a little over \$4,700: an increase of \$1000 from the previous year's ending balance. One recommendation that Steve and William would make for those not so accustomed to bookkeeping: it would help to have a summary report, and Rick will do that for next year. Steve noted that Rick has great records of the accounting which made the auditing very easy. It is hard work, and Steve said, "We give him high marks." Kevin thanked Steve and William for conducting this year's audit.

Rob Horton asked what the membership count is: Rick said that it is now about 120. There was a question whether LCBA would continue paying dues to the Washington State Beekeeping Association (WASBA); Kevin answered that the board will discuss our WASBA membership at the next board meeting and bring a decision to the membership. We are all concerned about whether the dues to WASBA are a good investment.

2016 Finances and 2017 Budget: Kevin showed a slide with LCBA's beginning balance of \$3,546.96 in January 2016 and the final 2016 balance with \$4,842.40. The association's total income was \$5,351; total expenditures were \$4,424.38. Kevin noted three primary classes of expenditures: insurance, clerical, and our venues. He reported that the board is reviewing the 2017 budget: the major change will be the new club apiary. Kevin noted that the board is prudent with funds and working to keep association fluid and running.

Our present balance, Rick reported, is \$6,749.40 in our main account and \$2,423.52 in our Youth Scholarship fund.

2017 Bee Orders: Kevin announced that the board has decided to go with Beeline Apiaries again this year. Kevin acknowledged the issues with the nuc colonies last year and reported that the board has given definitions of acceptable packages and nucs to Beeline. John, Harold's partner, was here to answer questions. John thanked all involved in last year and, re: the nuc issue, noted that this year, Beeline has a different supplier for nucs, so does not expect problems.

The order and pickup process will be the same as last year: orders will be taken at LCBA's March 9 meeting, and when the bees arrive, members will pick them up at Beeline; the board will have an LCBA pop-up tent with mentors to help with any questions. There could be a different date for picking up nucs and packages; nucs may be later than packages, though nucs will still put you about 3 weeks ahead, Kevin noted. There will be no limits this year, as far as Harold has heard; last year, the limit was imposed by Harold's supplier. The actual bee prices will be about \$110 for 3 pound Italian packages and \$130.56 for both the Italian and Carniolan 4 pound packages. We don't have the exact 3 pond Carniolan price yet, but Harold figures this will be close to Italians, if not the same.

Order process: Kevin explained that LCBA will have tables in the hallway from 6 to 7 pm on March 9 with board members to take membership forms and order forms. Kevin noted that we are asked to keep our noise level down because classes will still be going on down the hall. Rick asked that members bring exact change or checks made out to Lewis County Beekeepers' Association: he noted that in the audit report, we were a little over on the bee order because LCBA was not making change during the 2016 orders. Making change slows the ordering process down too much, with people left lined up waiting for a long time.

One member asked why the bee order form and prices are not on our website. Kevin noted that the bee orders are a pass-through with no profit for the association, but if we list prices on the website, it looks like we are making a profit, and the Department of Revenue would be asking us for sales tax.

Hive Registration: Another member asked about Washington state hive registration. Secretary Susanne Weil answered that the state requires beekeepers to register hives, and that if we do, we do not have to pay sales tax when we purchase bees. The hive registration used to fund a state apiarist; Washington has not had one for many years, and now some of the funds go to help fund the bee diagnostic lab and bee research at WSU. Also, if your hives are registered, the state is supposed to contact you if they will be spraying pesticides or herbicides near your hives.

Club Apiary Update: Kevin announced that LCBA has applied for a grant through TCC Verizon to help fund the club apiary. Phil Wilson led a subcommittee with Cody Warren, Bill Barr, and Dan Maughan to develop a budget, and then Susanne wrote the grant proposal. She and Kevin met with a TCC Verizon representative to go over it. The grant has been submitted; if we don't get it this time, we can try again in the next quarter of the year. Kevin thanked Phil and his committee for their careful work on the budget for the apiary.

Holiday Potluck: Kevin noted that members had been happy with Borst Park but would prefer to have the larger, less awkward venue of Kitchen #1. However, Kitchen #1 can only be rented for the full day. This raised the option of moving the potluck to a Saturday, having it a little earlier, and possibly having an event like a wax or soap rendering workshop along with it. Kevin

asked the members for a show of hands: should we keep the holiday potluck on the 2nd Thursday of December or move it to the first or second Saturday, and have it earlier? The majority wanted a Saturday, so the board will set this up. Bob Harris noted that the earlier start would make for a more relaxed event, especially if there are weather issues.



Above left, LCBA beginning beekeeping students pulling honey frames & tasting local honeys during a break; right, Rick Battin answers questions as students hunt for mites on a sticky board.

Mason Bee Project: Each year, LCBA member Kimo Thielges gives away 100 starter blocks at Gardening for Everyone; he also gives blocks to the Lewis County Master Gardeners for their grade school classroom project. Kimo announced that he put out his starter blocks for the season and raises them two ways, in 4 x 4 combos and straws, but the birds and vermin got in, and he has lost 90% of his stock. He has what he needs for GFE and the school project this year, but would like to set up a volunteer group of about a dozen members to raise the mason bees, so that if a couple of people lose them, it would not be a total loss. Kimo gave his phone number and email address (kimosabe@compprime.com). A new member asked whether one can keep both honey and mason bees: Kimo said that they do not interfere with each other.

Education Program Update: Susanne reported that LCBA's beginning beekeeping class, offered for the first time through Centralia College's Continuing Education program, has 51 students. We are now using a curriculum developed specifically for the conditions of southwest Washington; it is being team-taught by the LCBA Board. We are not offering the WASBA diploma and are not paying WASBA for each individual student. Kevin thanked Education Coordinator Peter Glover (who was not able to attend this meeting) and Susanne for writing the new curriculum, handbook and Power-points. Dan Maughan said that team-teaching was fun. *(Below, Dan teaching a lesson on treating for mites & student pulling demo honey frames.)*



LCBA's 2017 Youth Scholarship Students



Above, LCBA's 2017 Youth Scholars at the beginning beekeeping class: left, Adam Claridge (9th grade, Tenino); middle, Rylea Shan Powell (6th grade, Centralia); right, Emily Ecklund (7th grade, Centralia). All three students are home-schooled.

Youth Scholarship Program: Susanne reported that Adam Claridge, Emily Ecklund, and Rylea Powell, our three 2017 Youth Scholars, are attending the beginning beekeeping class and doing well on their tests. Kevin noted that we are keeping the Youth Scholarship budget the same as in 2016, and thanked Beeline Apiaries for offering us a 10% discount on their equipment again this year.

With this, Kevin adjourned the meeting and again thanked John Edwards for his very informative presentation.

Gottfried Fritz: Addendum to “Follow the Nectar – Adventures in Migratory Beekeeping” (see LCBA’s February Newsletter):

Gottfried notes, “There are two minor items that may be noticed by a person familiar with extreme southern Texas and also any readers who may have some experience with pollination payments for crops. The town in the Rio Grande Valley which has the third warmest average temperature in the lower 48 states is McAllen in Hidalgo county. Also the average pollination fee paid to beekeepers by almond growers in February of 2016 was \$175.00 per hive per blossom time with is usually 2 to 3 weeks. I wanted to clarify these two items since some of the readers may have been to that area in Texas and some may have had hives in pollination settings.”

PNW SURVEY OF BEE HEALTH & BEEKEEPING PRACTICES



Survivorship Survey ~ by Dewey M. Caron

Last year, 271 OR/WA backyarder beekeepers returned April surveys on overwintering colony losses/survivorship, and management such as colony feeding, sanitation and Varroa control efforts. The results are posted on this website: www.pnwhoneybeesurvey.com/annual-surveys. The report (see individual club reports – I key Lewis Co as LeCBA) for Lewis County is combined with the WA backyarder survey results. I appreciate the 25 responses from Lewis Beekeepers last year, the best rate of all the WA clubs.

Colony loss levels from all WA respondents were 60%, 1/3 greater than for the 249 OR survey respondents. For the 25 Lewis Co respondents, overall losses were 47%, slightly above the total OR/WA backyarder losses (44%). Most (60%) of Lewis co respondents were new beekeepers with 1 to 3 years experience and 48% had 1, 2 or 3 colonies. Four individuals had no loss and 6 had total colony loss. Ten individuals lost 1 or 2 of their colony number and 11 lost 3 or more; highest loss was 10 colonies. See LaCBA club report at above address for further survey responses.

For the most recent overwintering period (2016-2017) the electronic survey will be open March 28th and continue through end of April. It should take no more than 5-7 minutes to complete. If you wish to take the survey via paper copy rather than online, copies of the survey will be available at the April 13 Lewis Co meeting. I expect to be able to give you a summary report at the September meeting but results will be posted online by late May/early June.

Information requested will be very similar so I can compare last year with the current one. but I have trimmed the survey so it is shorter with fewer questions. If you would like to review the inquiries in preparation for the survey please locate the “2016 PNWals-prep” pdf download available on the website blog page or by simple Google search. Most Lewis Co beekeepers will review colonies prior to April so I recommend you write a few notes to help you complete the survey or take the electronic survey anytime after March 28th

While the main emphasis of the survey revolves around reporting how many colonies you had last fall compared to this spring, which we assess through hive location, hive types and originations (meaning were they overwintered colonies, nucs or packages purchased, swarms or splits), other survey questions sometimes open up more questions than provide answers. Last year, for example, beekeepers doing several wintering preparations improved survival, but feeding or use of the sanitation alternatives we listed did not result in better survivorship, at least

not directly. Those beekeepers using sugar shake or mite drop boards to monitor mite buildup had fewer overwintering losses, while use of other sampling methods did not. Non-chemical treatments did not, directly, improve survivorship, at least for our survey respondents; use of Apivar, essential oil or formic acid significantly improved survivorship

The BeeInformed survey is also conducted in April each year. I ask that you continue to participate in this national survey as well. Although funding is now in the last year of this effort, we are hoping to continue what is now a 10-year record of overwinter loss/survivorship. Our BIP report from last year is posted on the pnwhoneybeesurvey site and I include comparisons to losses in Canada and Europe. Access this survey at: www.beeinformed.org (it is available in April only)

THANK YOU FOR SHARING THIS PAST SEASON. Please consider completing a survey for the 2016-2017 season this April.

RECIPE OF THE MONTH:

Almond Strawberry Cream Cheese Pie

From the National Honey Board

Ingredients

- 1/2 cup - semi-sweet chocolate chips, melted
- 1 - 9-inch baked pie shell
- 1 package (8 oz.) - cream cheese
- 1/3 cup - whipping cream
- 3 Tablespoons - honey
- 2 Tablespoons - almond flavored liqueur
- 1/2 teaspoon - vanilla
- 1/8 teaspoon - salt
- 1-1/2 baskets - fresh strawberries,
washed & hulled
- 2 Tablespoons - honey
- 1/2 cup - red currant jelly, melted



Directions

Spread melted chocolate over bottom of baked pie shell. Chill. Beat cream cheese with whipping cream, 3 Tablespoons honey, almond liqueur, vanilla and salt. Spoon over chocolate. Chill 30 minutes. Combine strawberries with 2 Tablespoons honey and melted jelly. Toss gently to coat berries completely. Arrange over cream cheese filling. Refrigerate until ready to serve; best served within 2 to 3 hours.

BEES IN THE NEWS

Thanks to Steve Norton, John Stevenson, Phil Wilson, & the good folks at Bee Culture, American Bee Journal, & Fran Bach's "Items for Beekeepers"



Brett Adee checks his bees outside Bakersfield, CA (Photo by Kendrick Brinson, NY Times)

“A Bee Mogul Confronts the Crisis in His Field: Beekeeping on an Industrial Scale Is Central to American Agriculture, and “Colony Collapse” Has Proved To Be a Severe Test”: *The New York Times*, 16 Feb 2017

Third-generation beekeeper Bret Adee’s struggle to stay in the bee business is profiled in this in depth piece. Fees for almond pollination have risen from \$154 a hive in 2006 to as much as \$200 this year, but it’s no easy task for Bret to keep his bees alive and his 92,000-colony venture solvent amid bee die-offs. A fascinating picture of the commercial pollination business today – well worth a read. Visit: https://www.nytimes.com/2017/02/16/business/a-bee-mogul-confronts-the-crisis-in-his-field.html?emc=eta1&_r=0

For a video of bees in almond pollination, visit: <https://nyti.ms/2lmHioM>

“Precision spray pollination would negate problems such as not having enough honey bees, distribution of pollen-borne viruses and insufficient pollen distribution”: *Bee Culture*, 2 Feb 2017

Can spray pollination take the place of bees in cherry orchards? WSU plant physiologist Matthew Whiting has found that spraying could “negate problems such as not having enough honeybees, distribution of pollen-borne viruses and insufficient pollen distribution.” Pollen can be kept viable for two hours in a liquid state – and still be able to germinate plants. Whiting and colleagues are “using an electrostatic sprayer for 12 to 14 gallons per acre: electrostatic, because the (flower) stigma has a negative charge.” Other approaches being explored to maximize yield include withholding water for about two weeks prior to harvest, and attempting mechanical

pruning. For more information, visit: http://www.beeeculture.com/catch-buzz-precision-spray-pollination-negate-problems-not-enough-honey-bees-distribution-pollen-borne-viruses-insufficient-pollen-distribution/?utm_source=Catch+The+Buzz&utm_campaign=737aa8d8ba-Catch_The_Buzz_4_29_2015&utm_medium=email&utm_term=0_0272f190ab-737aa8d8ba-256261065



Above, drone about to take off – see story below.

“Sticky Gels Turn Insect-sized Drones into Artificial Pollinators”: American Bee Journal, 9 Feb 2017

Japanese researchers are using tiny insect-sized drones to pollinate lilies: “the undersides of these artificial pollinators are coated with horse hairs and an ionic gel just sticky enough to pick up pollen from one flower and deposit it onto another.” The researchers’ hope: not to replace bees, but rather, to create mechanical servitors to share the work of pollinating demanded to feed modern populations. The gel was found by accident – to see the process of serendipity, visit the original article – and it has been shown to camouflage the drones, “changing color in response to different sources of light--which could help artificial pollinators avoid predation.”

The little remote-controlled drones have four propellers; they use “horse hair to mimic the fuzzy exterior of a bee. The bristles create more surface area for pollen to adhere to and generate electric charge to keep the grains in place.”

In tests, “the remote-controlled drones, with hairs and gel attached, [flew] over the flowers of pink-leaved Japanese lilies . . . absorbed the pollen and then [were] flown to a second flower, where the grains were deposited, artificially pollinating the plants and causing them to begin the process of producing seeds. Drones without the gel and hair components did not have this effect.” The scientists hope that “robotic pollinators could be trained to learn pollination paths using global positioning systems and artificial intelligence,” though field deployment will take much more development. They say that their “goal would be to decrease the stress put on bee populations by commercialization so that they can do what robots can't--make honey--while the drones take over the demands of crop pollination.”

To read more, visit:

<http://us1.campaign-archive2.com/?u=5fd2b1aa990e63193af2a573d&id=0a3255a08a&e=e9ff21e0bb>

To watch a video of the drone in action, visit:

<https://www.eurekalert.org/multimedia/pub/132312.php> (Credit: Dr. Eijiro Miyako)

“Wild Bee Decline Threatens US Crop Production”: *American Bee Journal*, 20 Feb 2017

139 'trouble zone' counties are featured on the U.S.'s first attempt at mapping where the wild bees are. Where they aren't, or at least not in great numbers: “the country's most important farmlands -- from California's Central Valley to the Midwest's corn belt and the Mississippi River valley.” The article covers the impact that wild bee decline would have on agriculture: each year, “as much as \$3 billion of the U.S. economy depends on pollination from native pollinators like wild bees.” The University of Vermont scientists are developing a mobile app to help farmers “upgrade their farms to better support wild bees.”

The pollination decline hotspots “tend to be places that grow specialty crops -- like almonds, blueberries and apples -- that are highly dependent on pollinators. Or they are counties that grow less dependent crops -- like soybeans, canola and cotton -- in very large quantities. Of particular concern, some crops most dependent on pollinators -- including pumpkins, watermelons, pears, peaches, plums, apples and blueberries -- appeared to have the strongest pollination mismatch, growing in areas with dropping wild bee supply and increasing in pollination demand. Globally, more than two-thirds of the most important crops either benefit from or require pollinators, including coffee, cacao, and many fruits and vegetables.”



Wild Bee Abundance map developed by the University of Vermont

Of course, there are many stresses on wild bees from parasites to pesticides, climate change to infection diseases: “but their decline may be caused by the conversion of bee habitat into cropland . . . [i]n 11 key states where the map shows bees in decline, the amount of land tilled to grow corn spiked by 200 percent in five years -- replacing grasslands and pastures that once supported bee populations.”

To read more about the findings, as well as how the map was developed, visit:

<http://us1.campaign-archive1.com/?u=5fd2b1aa990e63193af2a573d&id=915897b52c&e=e9ff21e0bb> .

For the original University of Vermont press release with map information, visit:

<http://www.uvm.edu/giee/?Page=news&storyID=22053&category=gund> .



Above, Vita Europe's "Bee Gym" Helps Bees Fight Mites

“Bee Gym’ Helps Bees Control Their Number-one Enemy, the Varroa Mite”: *American Bee Journal*

Vita Europe’s new “Bee Gym” is intended to give bees a sustainable, chemical free way to encourage the hygienic behavior of grooming away mites. The 11 cm x 11 cm Gym goes inside the hive: bees “rub their backs and abdomens” on its “wires, flippers and scrapers” to get rid of mites, which “fall through a normal varroa mesh floor onto a sticky insert or to the ground from where the varroa mites cannot jump back into the hive. The sticky insert should be regularly refreshed and the Gym should regularly be cleaned with washing soda.” To read more about how the “Bee Gym” was developed, visit:

<http://us1.campaign-archive1.com/?u=5fd2b1aa990e63193af2a573d&id=631b70936c&e=e9ff21e0bb>

“Honey bees outfitted with tiny microchips reveal possible bizarre effects of a covert, yet deadly, virus”: *Bee Culture*, 18 Feb 2017

According to Bee Culture, “Detective work involving honey bees outfitted with ultra-small microchips reveals that a virus once thought to be relatively benign is causing honey bees to live fast and die young.” This new threat is a “covert form of deformed wing virus” that targets brain centers in the bee that are “involved in higher cognitive processes” and changing worker bees’ behavior. Lead scientist Tom Wenseleers of the University of Leuven says that the virus may have “evolutionary interests in manipulating workers to move out of the hive and then maybe transmit the virus to other patches in the environment or cause them to drift to other hives.”

Although the study showed that “adult worker honeybees with deformed wing virus often show no outward physical symptoms of the illness, which can otherwise cause crippled wings when victims are infected in the larval stage,” infected workers begin to forage “at much earlier ages, reduce their activity levels earlier than other adult workers and then die younger than honeybees without the virus.” These bees may realize that they are sick and leave the hive to prevent spreading infection.

Monsanto has been working on fighting the mites that transmit the virus via RNA Interference (RNAi). RNA helps bees make protein, and Monsanto’s approach is to “mix[] synthetic RNA in a sugary syrup fed to bees. The synthetic compound ‘is designed to bind to specific genes of the pathogen or parasite, thereby preventing it from replicating.’ The technique still needs refinement, possibly because the synthetic RNA is not stable enough over long periods of time.”

To read more, visit: <http://www.beeculture.com/catch-buzz-honey-bees-outfitted-tiny-microchips-reveal-possible-bizarre-effects-covert-yet-deadly->

[virus/?utm_source=Catch+The+Buzz&utm_campaign=b76b84b873-Catch_The_Buzz_4_29_2015&utm_medium=email&utm_term=0_0272f190ab-b76b84b873-256261065](http://veterinarynews.dvm360.com/have-you-heard-buzz-honeybees-fall-under-vfd-regulations-too)

“Have you heard the buzz? Honeybees fall under VFD regulations too”: DVM Veterinary News 7 Nov 2016

In January, the new FDA “Veterinary Feed Directive,” or VFD, regulations went into effect. Why should beekeepers care? Now, honey bees are “considered a food animal,” so they will be regulated like chickens and cows, and “antibiotics beekeepers use will no longer be available over the counter and will require a VFD order from a veterinarian to be administered.” The principle behind the new ruling is to prevent abuse of antimicrobials so that resistance does not develop. The “VFD order is a written statement from a practicing veterinarian authorizing the use of a VFD drug or combination VFD drug in animal feed.”

The American Veterinary Medical Association is working to assemble a committee that can provide guidance soon. The new directive will mainly affect commercial beekeepers who routinely treat for American Foulbrood, which is treated with Terramycin.

Veterinarians have not sought this new work: “beekeepers are wondering why veterinarians are getting into it. Is it just about money? Meanwhile the veterinarians are also wondering why they have to get involved. Neither group is really set up well to work together, but the FDA wants it so . . . A lot of beekeepers are saying they’re not going to call a veterinarian, so veterinarians need to educate the community and say, ‘We’re here and we know what we’re doing.’”

To read more about this developing story, visit: <http://veterinarynews.dvm360.com/have-you-heard-buzz-honeybees-fall-under-vfd-regulations-too>

For more information about VFD regulations, visit:

<https://www.fda.gov/AnimalVeterinary/DevelopmentApprovalProcess/ucm071807.htm>

“Despite Few Taste Genes, Honey Bees Seek Out Essential Nutrients Based on Floral Resources”: American Bee Journal, 10 February 2017

Ever wonder why your bees seem to seek out nasty-looking water? Bees have relatively few genes enabling taste – yet they can determine when their colony is lacking necessary minerals and nutrients, and forage to find them. In the fall, researchers learned that bees look for “calcium, magnesium, and potassium, all commonly found in pollen - by foraging in compound-rich or ‘dirty’ water. When flowers and pollen are abundant in the summer, the bees prefer deionized water and sodium, ultimately suggesting that bees are foraging for minerals in water based on what is lacking in their floral diet.”

The new study from Tufts University “suggests that beekeepers should provide opportunities for their bees to access specific nutrients, possibly through a natural mineral lick, to support their balanced health because the bees will search for the minerals when they need them. It is also an opportunity for the general public to support the bee population by planting a diverse range of flowers that bloom throughout the year.”

To learn more, visit: <http://us1.campaign-archive2.com/?u=5fd2b1aa990e63193af2a573d&id=b39bd3e137&e=e9ff21e0bb> .



Spring Pollen and Nectar Source: Pussy Willow: February 14, 2017, Blog by Rob Snyder, Bee Informed Partnership

In northern California, the pussy willows began to bloom in February and will be coming on in southwest Washington soon to offer our bees a fresh pollen source. In the photo above, “the anthers of the pussy willow don’t appear to have much powdery pollen on them because of the rain and wind. The dioecious trees produce both nectar and pollen; only the male produces pollen. They can produce a considerable amount of nectar, but usually it is too cold for the bees to really work the plants.” BeeInformed’s blogger also notes, “I’ve read that they can produce 100-150 lbs. of nectar and 1500 lbs. of pollen per acre, but have not seen this in any operations. The pollen has 20-25% crude protein, about average in blooming plants, but helps when nothing else is really blooming at the time.”

Rob also notes, “A compelling point about the pussy willows is that they are easy to propagate; you can cut off new growth and place it in water for several weeks until roots are visible and then the cutting is now ready to plant. I have not tried this, but I would think rooting hormone would speed up the process. I may attempt to propagate some this spring. I will post photos if everything works out.” For more photos and links to the BeeInformed Blog, visit:

<https://beeinformed.org/2017/02/14/2017-spring-pollen-and-nectar-source-pussy-willow/>

“Honeybees let out a ‘whoop’ when they bump into each other”: The New Scientist 14 Feb 2017

Bees produce a “vibrational pulse” when they bump into each other. Entomologists had assumed that this was “a signal to other bees to stop what they are doing,” but new research suggests that it “might actually be an expression of surprise.” One prevailing hypothesis was that head bumps were how bees ask to be fed, since the signal was often followed by bees exchanging food. Then, research showed that bees made this signal when one was trying to stop another from wagging; it was then “interpreted as a “stop” signal” to warn fellow foragers away from dangers, like “a predator, or a researcher bothering the bees for an experiment.”

In the new study, scientists at Nottingham Trent University in the UK measured the pulses by embedding accelerometers in the hive comb to pick up the vibrations that bees make using their wing muscles. They heard 6 or 7 signals a minute from just one small comb spot, which led them to think, “There’s no way a bee was trying to inhibit another one that frequently, and there’s no way a bee would request food that frequently.” The signal happens mainly at night (whereas wagging is a daytime activity of foragers).



“Honey Bee Head Butts,” by Simon Colmer, NaturePL

Next, cameras in the hives showed that “the signal often happens when a bee bumps into another bee near the accelerometer, and not when bees are waggle dancing or exchanging food.” To see the video of bees bumping, click on: <https://www.youtube.com/watch?v=U05VXQRFhns>

The lead researcher thinks that “in the majority of instances, it is bees being startled that produce the signal . . . instead of the “stop” signal, it should be called the “whooping” signal.”

This new whooping signal gives a new way “to monitor the status of the colony, by delivering a standardised stimulus and measuring the response. . . . an unstressed colony [may] have less of a response and a colony that’s very stressed would be very reactive to a small stimulus.” To read more, visit: <https://www.newscientist.com/article/2121275-honeybees-let-out-a-whoop-when-they-bump-into-each-other/#.WKXW4DmYEos.email>

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.

WASBA 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)