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May 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



Saturday, May 6 & Sunday, May 7:

LCBA Exhibit, Spring Youth Fair, SW WA Fairgrounds, Exposition Hall

When: Sat May 6, 10 a.m. -10 p.m.; Sun May 7, 10 a.m. -5 p.m.

For the 4th straight year, LCBA will have an exhibit in the Exposition Hall to help introduce children to honey bees and beekeeping. We'll have our Observation Hive, a "make your own bee bracelet" stand, plenty of show & tell items, & a honey tasting challenge: can you tell which is the Carrot Blossom honey? Our 3 2017 Youth Scholarship students will be volunteers at the booth – thanks to them & to our LCBA Volunteers (Chuck Ament, Bill Barr, Gordon Bellevue, Tracy Chilelli, Pamela Daudet, Gottfried Fritz, Mel Grigorich, Dan Maughan, & Susanne Weil). Please visit! For more info about the Spring Youth Fair, visit their website at www.springyouthfair.org.



Thursday, May 11: LCBA Monthly Meeting

Evaluating Brood Pattern & Re-Queening: Speaker, Rev. Alan Woods

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, Speaker; 7:45 – 8:45, Business Meeting

Speaker: Rev. Alan Woods of Woods Bees, Centralia, will share his local queen breeder's insights into evaluating brood pattern, understanding why a colony is making a queen, local queen rearing, maintaining a queen nuc, & more. Beekeeping Q&A and brief business meeting.



Saturday, May 13 & Sunday, May 14:

Lewis County Master Gardeners' Annual Plant Sale

When: Saturday, 9 a.m. to 4 p.m.; Sunday, 10 a.m. to 2 p.m.

Where: Exposition Hall at the Southwest Washington Fairgrounds

Want to plant a great garden to help feed your bees? The WSU Lewis County Master Gardeners are holding their annual Plant Sale May 13-14, 2017 at the Southwest Washington Fairgrounds. Thousands of locally grown plants donated by Lewis County Master Gardeners will be for sale: annuals, perennials, berries, herbs, shrubs, native plants & more, plus garden accessories like bee blocks, planter boxes and more. Credit & debit cards accepted. For more information, visit http://lewis-mg-mrc.org/events_activities/plant_sale



Saturday, May 20

LCBA's 1st 2017 Workshop: Spring Management & Hive Inspection

When: 11 a.m. – 1 p.m. (Weather Permitting! We'll reschedule if need bee)

Where: At an LCBA Mentor's apiary in Adna. To RSVP for Directions, please email susanne.beekeeper@gmail.com or call 360 880 8130.

What: Hive inspection techniques & tips for beekeepers with new colonies from packages & nucs. In small groups led by mentors, we'll get hands-on pulling frames, discussing what to look for to know if your colony is healthy & your queen is laying, how to deal with cross-combing, when to add hive boxes, & using/evaluating sticky boards for mite load assessment. Possibly we'll look at how to do a split. Discussion over refreshments to follow.

Bring: Bee suit, gloves, hive tool, & your questions! LCBA will provide refreshments.



Sunday, May 21: Ruhl Bee Workshop with Randy Oliver

When: 9:30 am - 4:00 pm; **Where:** Ruhl Bee Supply / Brushy Mountain Farms, 29600 SW Seely Ave. Suite B, Wilsonville, Oregon 97070

What: A full day of seminars and workshops led by guest speakers Randy Oliver & Carolyn Breece. Randy will speak on "Reading the Combs to Understand Colony Condition over the Season" & "Randy's Recent Research on Varroa Management, Including Oxalic Acid/Glycerin." Carol will speak on "7 Habits of Highly Effective Beekeepers." Lunch is provided.

Admission: \$60.00 per person; call 1-800-233-7929 to reserve a seat. For more info, visit: <http://www.ruhlbeesupply.com/RBS-Classes-and-Events.html> .

Thursday, June 8: LCBA Monthly Meeting

We're still working on this one! Peter Glover will give a half-hour presentation on what beekeepers need to do to get honey & wax ready for our Southwest Washington Fair competitions – there will be a 2nd presentation, TBA.





2 WSU Beekeeping Courses:

#1 Beekeeping Short Course

June 9-10, 2017, Pullman, WA

Interested in starting some bee colonies or want more confidence in working and caring for these? This 2 day course will cover bee biology, pest/disease identification, colony management, honey bee IPM, and gloveless beekeeping. The format is a combination of instruction and hands on demonstration. Bring a bee veil, whatever protective clothing you are comfortable in, and lots of questions.

Instructors: Steve Sheppard, Susan Cobey & WSU Bee Lab graduate students

Registration: fees \$125; To register for this workshop, you have the option to:

Print out a hard copy of the registration form and mail it to the Department of Entomology along with the payment for your registration fee. To download the registration form, visit:

<http://entomology.wsu.edu/apis/files/2017/02/Registration-Form-2017-COPY.pdf>

To register online, visit:

<https://app.smartsheet.com/b/form?EQBCT=95e472abfa31438c94dbc40d05a3b02b>

Location: Ensminger Pavilion, Washington State University Campus – Pullman, WA

Mail to: Adam Williams, Washington State University, Dept. of Entomology, 166 FSHN, P.O. Box 646382, Pullman, WA 99164-6382

#2 WSU Rearing High Quality Queens

June 11, 2017, Pullman, WA

The one day workshop will present what it takes to rear high quality queens. Basic biology and various methods of queen rearing will be presented. The workshops emphasize hands on instruction in queen rearing methods, with lecture and demonstrations. Students will be involved in various steps including: setting up cell builders, grafting, and establishing mating nuclei. Both queen right and queen-less systems will be demonstrated. Bring a bee veil and whatever protective clothing you are comfortable in.

Instructors: Steve Sheppard, Susan Cobey & WSU Bee Lab graduate students

Registration: fees \$175; To register for this workshop, see the links under the “Short Course,” above.



Above, Shelter #2 at Lintott Alexander Park

Saturday, July 8: LCBA's 9th Annual Summer Potluck

When: 4 to 8 p.m.; Where: Lintott Alexander Park, Chehalis

Join us for good food, fun & fellowship, plus a drawing of fun beekeeping items to support our Youth Scholarship Program. More details closer to the time!

Some Longer-Term Upcoming Events ~ Mark Your Calendars!

Thursday, August 10: LCBA Monthly Meeting

Dr. Danny Najera: Mite-Busting!

Saturday, Aug 19: 4th Annual Oregon Honey Festival, Ashland, Oregon

If you would like to be an exhibitor/vendor, please get in touch with the festival managers at oregonhoneyfestival@outlook.com or visit their webpage: www.oregonhoneyfestival.com.

September 5 - 8: Western Apicultural Society of North America 2017

40th Anniversary Conference, UC-Davis, California; for info, visit:
<http://www.westernapiculturalsociety.org>

Saturday, September 9: Randy Oliver Talk in Everett, WA, 1-5 pm

Registration: Only 300 seats available, so please buy your tickets early (on sale April 15th).
Price: \$25, available through <http://www.brownpapertickets.com> by searching for Randy Oliver.

Thursday, September 14: LCBA Monthly Meeting

Dr. Dewey Caron: Southwest WA Bee Losses & Management Practices

THURSDAY, APRIL 13 ~ LCBA Monthly Meeting Notes:

Topic: Spring Management Issues

In the absence of President Kevin Reichert and Vice President Bob Harris, Secretary Susanne Weil opened the meeting, announcing the names of the more than 30 students who have completed all the tests in LCBA's Beginning Beekeeping class. Diplomas were available for pick-up at our meeting break. Congratulations to all of our graduates!

Mentorship Coordinator Dan Maughan led our discussion of spring management issues, starting with an overview of new beekeeping tools that Dan has found interesting and useful this year, as well as things that new beekeepers should be mindful of.

Spring dwindle – or spring die? Dan noted that just when we think that our bees have successfully overwintered, we may find that they reproduce too fast, grow the colony too large for the available natural food, and run out of nectar and pollen. We have to be vigilant about what is blooming, if bees are bringing back much pollen, and consider supplementing the natural supply with sugar syrup and pollen patties. Mentor Gottfried Fritz noted that it's important to keep the bottom board cleaned so that dead loss doesn't block the entry.



Above, a new top feeder design that bees can't drown in – this photo is from Dadant.com.

A new feeder option: Dan has gone through all his colonies and fed them sugar syrup. This year, he discovered a new type of feeder (pictured above): it acts like a bucket feeder, but has a valve on the bottom. It can be placed outside the hive for the bees to rob, or put on top of the frames with a housing, like a bucket feeder. Dan likes it because it is not sloppy and messy – and bees can't fall in and drown. Phil Wilson asked, "But do the bees like it?" Dan said that if there is sugar in it, the bees will like it. Harold Mullins asked if the super-size box would be big enough to house it: Dan answered that since it is under 6 inches deep, it would.

Feeding formulas: In fall and early spring, popular wisdom is to use a 2:1 sugar:water mix and add a little bit of flavor, like Honey-B-Healthy. Last year, Dan had a hard time with his ratio: his scale was off, and he ended up with some syrup that fermented – sadly, the bees who got that fermented stuff died. Then Dan weighed everything out: he does this by weight, not volume, and he made marks on his bucket for 2:1, and then another mark for 1:1 for spring/summer feeding so he could not mess it up. The marks are for water, and then he stirs in his measured sugar.

LOTS of sugar. Dan now knows the sugar-stocking lady at Walmart by first name. He confided that he spent about \$3000 to feed over 100 hives!

A short cut for those who don't want to do all that mixing: After this, Dan quipped that “I needed to save my marriage”: he started reading about the “Pro-Sweet” syrup that Mann Lake sells. One of his mentees, Bill Barr, was using Pro-Sweet last year, and Bill’s bees built up really well, with honey bees “exploding out of his hives.” Dan’s bees, though, were not doing this. Pro Sweet has binomial and monomial sugars and will not ferment: if you buy it out of the back of their home store in California, it’s called “Type 77.” We know that HFCS is bad for bees, and Dan asked the folks at Mann Lake why the HFCS in Pro-Sweet doesn’t kill bees: they said that it will, if you let it sit around long enough. It will spoil within 100 days: that’s enough time for the a one-third lethal dose of a chemical called hydromethyl perfonol to transfer into the syrup. Honey degrades in same manner if heated – and this is the reason not to feed cooked honey back to bees. The mix is only 23% water instead of 50%, so you are giving more nutrient and sugar. Gottfried commented that, historically, he doubted Washington has ever had 100 days of hot weather, so we are probably safe!



Above left, “Pro-Sweet” from Mann Lake; right, pollen patties from GlobalPatties.com.

Dan commented that the difference between a frame with nicely built up comb and a very light build can be what you feed them. A member asked: why do we feed pure cane sugar? Dan noted that the impurities in beet sugar are lethal to bees; cane sugar is not. Walmart, Costco, Shop-n-Kart, and Reicherts’ Distributing all have bulk prices on pure cane sugar.

Pollen patties: Some beekeepers feed pollen substitute patties for the protein that bees need to grow brood. If you want to have strong brood and there is spotty pollen during a late or delayed spring like this year’s, then it can be a good idea to supplement. Dan says not to worry about the “dose” - just feed them what they will take. Susanne noted that she and Peter have found that their bees turn up their tiny noses at most pollen patties, but start eating Global Patties (online out of Montana) the second the patties hit the frames. Dan noted that if you put pollen patties on top of the brood frames, they will eat it a lot quicker. Steve Grega asked if the pollen patties get old: Dan said that, yes, they do; Mel Grigorich suggested putting them in the freezer or refrigerator. Gottfried noted that when patties are old, bees will just tunnel into them instead of eating them, and that if they get wet, they mold, so it’s important to check their status.

Less expensive hive components: Dan noted that boxes are usually priced fairly inexpensively, but the components, like inner covers, telescoping covers, and screened bottom boards, are

priced high. However, you can make some components inexpensively, like the inner cover. Dan displayed an inner cover that he had made (still needs its hole cut in). Mann Lake wants \$12.95 for an inner cover, but Dan has 75 cents worth of plywood in his, plus some staples and glue for less than a dollar. If you are handy, you can save a lot making your own with careful measurements for fit.

Dan does not put the hole into some of his inner covers them because of swarms – he likes to have some covers that are solid, in case the box in which he’s transporting a swarm tips. He staples one to the bottom of a hive box to make a deep to catch a swarm: when he puts on the telescoping cover, they can’t get out. This is ok if it is a quick trip to bring your swarm home – Dan warns, don’t leave them in there long because there’s very little ventilation.

Speaking of swarms . . . No one has had any yet because of our long, long spell of wet weather. Cody noted that in Tumwater they have standard boxes for reams of paper that you can buy and can fit frames and bees for transport. Gottfried noted that you can take a big piece of cardboard or plastic to put below a swarm that you are about to shake down: the bees will land on the flat of cardboard, not get stuck tangled in grass.

How to prevent swarms: Dan reminded new beekeepers that the main reason bees swarm is congestion. When inspecting, put a new box on a colony that has built out 7 of 10 frames in its top box. In a larger apiary, a beekeeper can pull some frames from a big colony and put them into a weaker colony to build them up: that not only can stop the bigger colony from swarming, but also helps both colonies lay more and be more ready for the nectar flow.

Splits: Beekeepers who have had a large colony over-winter successfully and build up well in spring can consider splitting that colony and let one box re-queen itself, or buy and insert a new queen in the queenless half. One problem Dan sees with buying a queen is that when you are in the bee yard and see a colony about to swarm and you want to split, you need a new queen right away, but buying a mated one may cause you to wait two weeks for her arrival. What to do?



Queen Mandibular Pheromone strips (photo, BeeSource.com)

Inserting pheromones to prevent swarms: Dan has used brood pheromone to help bees not feel like they needed to swarm: the pheromone doesn’t substitute for a queen, obviously, but it slows down their swarming impulse by confusing them with queen odor.

This year, Dan is using strips of queen mandibular pheromone (see above). He drops one into a hive: he could see that the bees rushed to it; they liked the smell of it. Gottfried commented that the pheromone strips act like a surrogate queen; it's said that it lasts as long as you have brood in the hive. To keep a hive queen right, you need a queen or short-term queen substitute. Bill asked whether the bees get so used to the pheromone strip that they won't want the real queen: Dan said he'd take it out a couple hours before to let them feel a bit antsy before putting in the real queen.

Gottfried noted that in splitting, a major problem he sees is that in our area, bees produce drones so late in spring that you may not get good mating till midsummer. Dan agreed: bees need about 75-degree weather for the queen to mate. If it's colder, she may get chilled and die, or may not get well mated. Jovanie Montalvo (LCBA's first youth scholar) noted that queens can be eaten by birds on their mating flights.

One member wanted to know if anyone has had any luck with banking queens: Dan answered that he has not, but knows a few people who have. One problem he sees is that the bees can get confused by a queen bank: with so many pheromones around, they may not identify their own queen as the true queen and may kill her. Also, Gottfried noted, since queens in a queen bank don't have a chance to lay, that can promote spotty laying when they do finally get put into a hive.



Above, left, spotty brood pattern (photo, Bee Informed Partnership); right, a strong brood pattern covered by bees (photo, Susanne Weil)

Nucs: why buy a nuc? Nucs give a beekeeper a head start on a colony: a 5 frame nuc in May will usually build up faster than a 3 pound package in April. Dan has seen them explode in population. Buck asked when to take the bees from the nuc box and put them into a deep: Dan noted that with nucs, you must be vigilant to be sure they have enough room to avoid their swarming. If you have a nuc with 5 frames crammed in – three with brood, one with lot of honey and pollen, and one with some honey and a little space for laying – a beekeeper may think there's time to put the bees into a regular deep box in a week, only to find that next week that the bees have already swarmed. Don't wait to give that box, Dan advises: give them room to grow. Also, when putting the bees into the deep, be sure to keep the frames in the order they were in in the nuc so as not to break up the brood chamber (“like a PBJ,” Dan quipped).

“Checker-boarding” frames: Gottfried noted that if a beekeeper puts a four-frame nuc into a deep, if there's a good nectar flow, the beekeeper could “checkerboard” the frames – that is, insert frames with drawn comb between empty frames to encourage the bees to draw out more comb. In doing this, again, it's important not to break up the brood chamber.

Used frames & boxes: Dan noted if you have good drawn frames from previous year, you can use that comb, provided it's not moldy and that the bees didn't have disease. Rob and Rocki Horton asked whether it is ok to use gear from a friend who gave them his boxes and frames, since he was getting out of bees; they froze the comb to kill any wax moths. Dan said that this should be ok, though if the comb is very dark, it may be too old: layers of shed bee eggs and other detritus add volume to cell walls, despite the bees' cleanup efforts, and eventually the queen will not be able to insert her abdomen easily to lay. Another thing to be concerned about, Dan noted, is whether the frames came from an area with a lot of pesticides: he urges not being shy about asking that question.

Mold on frames "can be nasty," Dan pointed out. If there's only a little, you can scrape it off, or let the bees clean it up. However, if there are patches like old moldy bread on the frames, throw it away. Gottfried noted that if you scrape away old wax comb to get rid of old bee bread or moldy pollen, sometimes you get stuff caked into the indentations of the comb, and rather than working that comb, the bees will avoid it. Susanne quoted former LCBA President Norm Switzler, who says that "foundation is cheap; bees are expensive." Mel Grigorich noted that he has used a pressure washer to get the crud out.

Reversing boxes: Steve Grega asked about reversing hive boxes at the end of winter: should that be done every year? Dan answered that if the bees have nothing in the bottom box with no activity, then yes, but that if there are still a lot of bees below, it's best to leave them alone rather than disrupt them by reversing boxes.



Phacelia or purple tansy (photo from Egmont Nurseries; bloom on a Linden Tree (photo from "A Gardener's Table")

Planting for bees: Gottfried recommends two particularly bee-friendly plants. The first is the annual phacelia, a.k.a. purple tansy: Cody noted that if you plant it, then let it bolt and then weed-whack to dead-head, the seeds will fall and reseed. Phacelia can be bought at a farm store or online: Cody said that if you google "purple tansy" from "Outsidepride.com," they ship free. Also, Gottfried noted that a basswood or linden tree will produce great nectar: not for very long, maybe ten to twenty days in late May to mid-June., but in that time, their nectar flow is heavy. If you plant them, they will be around a long time. Burnt Ridge Nursery sells two-year-old linden trees for five dollars apiece, nice looking and ready to bud, Gottfried reported.

Keeping bees dry: Dan said his bees that stayed dry did well; the ones that often got wet died. Juergen Ermert asked if a roofing shelter helps. Dan noted that back in the day, when monks needed wax for altars, they would protect the bees of Exmoor, otherwise exposed to the elements, by building a wall with holes, then inserting skeps to keep the rain off them as much as possible. (Then, skeps were woven from willow.)

Gordon Bellevue noted that he had five hives going into winter: one was in a carport [not used as carport, more as workshop] so that it would be protected from rain, but that was the only one that didn't make it – his more exposed ones, ironically, did fine. The garden hive tops help: he lives in the woods, and moisture killed all his hives till he figured that out. The three he has now are sucking down the sugar syrup and doing well. Another member noted that if you use garden top covers, be sure to latch them down so that they don't blow off in a high wind: he lost one colony when a windstorm whipped off the cover.

Joevanie Montalvo, who was LCBA's first Youth Scholar back in 2014, still has his original colony, now four years old and doing well. He has sandpapered the inner walls of boxes one by one per year. Also, Dan noted that Joevanie's bees are elevated well off the ground and out of cold damp air from the ground.

Gottfried noted that 2016 Youth Scholar Josiah's bees did very well in summer, but died out in winter; they had been up on pallets, but the hive was packed with dead bees – it could have been partly the very cold winter, partly air flow restriction when we had that heavy snowfall. Gottfried is going to look for a swarm to give Josiah. Dan noted that beekeeping is not for the faint of heart! Susanne reported that our other 2016 Youth Scholar, Sam, also lost his bees, but is not giving up: he and his dad Brian each bought a package of bees and have moved their apiary to a part of their property that should be dryer.

Yellowjackets: Phil Wilson said that as of the end of September, he had 11 hives going strong, some in double deeps – but in the middle of October, several hives' bees just left, with no dead bees left behind. Then, by the end of November, two more died because of yellowjackets. Peter Glover noted that now is the time to put out yellowjacket traps, in the upcoming couple of days of warm weather: if you catch yellowjackets now, you are catching the queens. Gordon noted that hibernating yellowjacket queens like to burrow into mason bee blocks! The up side of this is that you can dump them out and stomp them. Dan suggested that we not put the traps right by hives so as not to draw the yellowjackets to the hives: putting traps about 10 or 15 feet away, where convenient, does not kill the bees.

With this, we took a break; bee-friendly wildflower seed packets without invasive weeds were available for give-away, Susanne announced; also, the sign-up for volunteers to staff LCBA's exhibit at the Youth Fair was available, as were those beginning beekeeping class diplomas.

April Business Meeting Notes

Treasurer's Report: Rick Battin reported that LCBA's main account has \$10,117.37 (after paying \$612.36 for our 2017 insurance policy and \$75 to Centralia Parks and Recreation to reserve our holiday potluck space in Borst Kitchen #1). Our Youth Scholarship fund has \$1,222.32, after the bees and gear were purchased from Beeline for our three Youth Scholars. We are on track to run the Youth Scholarship Program in 2018 and will have another fundraising drawing at our July 8 Summer Potluck.

Garden Top Hive Covers from Lewis County Worksource: Cody Warren displayed samples of these well-made hive tops, which he first saw at last year's Spring Youth Fair when Lewis County Worksource's booth was situated opposite LCBA's. LC Worksource gives training to special needs young people, teaching them the carpentry trade. Cody bought a hive top for one of his colonies, then asked them to make more to a design Cody suggested, giving more space for moisture ventilation in the top. These tops fit a standard Langstroth hive and come in either a

metal or wooden roof. Cody is excited about these garden top hives: if we get a bulk order, those who order and the young people with special needs who make them both benefit. Cody announced the prices: \$35 to \$37 standard for a 10 frame hive top cover; with the extra 4 inch porch, the price is \$37.50 and will still fit a standard Langstroth; with metal lids, the price is \$50. Cody passed around a sign-up sheet for those interested in ordering these garden top hives. Kevin Reichert and Cody are coordinating the order. Dan thanked Cody and noted that this is a great product that helps people who are striving to better themselves.

Package & Nuc Bee Orders: Susanne gave the update on our bee order pickup, set for Wednesday, August 19 (it was subsequently pushed back to Saturday the 22nd because of weather issues in southern California).

Bee Loss Surveys: The BeeInformed Partnership and Pacific Northwest Bee Loss surveys are both open this month. Susanne showed members the links under Upcoming Events on our website and encouraged members to participate. Dr. Dewey Caron will be our September speaker; he breaks out Lewis County data specially for us and correlates it with reported management practices, so that he can tailor his presentation to our situations. Last year, LCBA was the PNW's top responding bee association on the I-5 corridor – let's keep it going! The surveys closed on April 30.

Club Apiary: In the absence of VP Bob, Susanne reported on the club apiary's progress. The wet, soggy, cold weather has delayed our progress, but has not dampened our determination. Bob is ready to prep the ground as soon as the weather cooperates. Meanwhile, a number of members have offered donations of bees and equipment. Kevin Mills is donating 3 nucs; Alan Woods is donated a nuc; Kevin & Jeanne Reichert, and Peter Glover & Susanne, are each donating a complete Langstroth hive set. Cody Warren and Alan & Anna Sparling are each donating a top bar hive which the board hopes to "staff" with swarm bees. Nancy Toenyman has offered to donate frames and foundations. Dan will donate screened bottom boards and inner/telescoping covers. Susanne noted that we will have an alcohol bath to ensure that visitors' hive tools do not carry disease to or from the apiary. We will wait on the storage shed till 2018; Bob will let us house gear in his barn. Meanwhile, we are still seeking grant funding: we will try the TCC Gives grant again. Phil noted that Trans-Alta and the Washington Department of Agriculture both have grants oriented to rural projects; Susanne said the board will look into these.

Mentor Program: Dan reported that Kevin asked him to outline his five key goals for how our LCBA mentors will work with their mentees. Of course, everyone has their own way of working bees, Dan noted, and individual mentors/mentees will naturally develop their own relationships. We plan to mentor new beekeepers actively for one year and then be available for pressing questions after that. These are Dan's five goals for mentors:

1. Most of the mentees have taken a class or have some beekeeping experience. Try to teach mentees to recognize things in the hive that have been learned in class. Capped brood, larvae, eggs, and drone, worker and queen bees should be distinguishable from bee bread, capped honey and unripe nectar.
2. Teach proper bee keeper working speed, timing, and position relative to the hive. Successful beekeepers work the bees slow enough that they do not get overly stressed yet

fast enough that they do not get cold. Bee flight path should not be blocked. Bees should be treated humane with a minimum of them being rolled or smashed.

3. Teach the mentee to recognize changes in bee density in the hive, and seasonal changes that require new tactics of beekeeping. Mentees should be taught what the possible needs of the bees are for each season of the year. Feeding, winter care and moisture control, splits, adding or subtracting deeps and supers, swarm control management, and bee health /pest control are all issues that should be addressed.
4. Proper location of a hive to maximize colony growth should be taught. Other techniques should be taught to mitigate the concerns of neighbors, and local pesticide use.
5. Show the new beekeeper just how much fun and interesting beekeeping is. The mentorship program is set up to promote success with first year beekeepers, and as such should help build the new bees into lifelong beekeepers. Let the new beekeeper understand that as they gain experience and understand bee husbandry that they too can help others learn about bees.

These goals will be posted under the Mentor link on our website. We will be announcing our first 2017 workshop soon – the weather has made this hard to plan!

Swarm Captures & Colony Removals: Phil noted that if anyone gets calls for removals that aren't in a person's house, please let Susanne know so that we can set up a teaching workshop for removals from a bee structure. Phil and Walt Wilson did a removal in a basement last week (like Tom Sawyer, Phil made Walt do all the work). Susanne commented that not only do we save bees from getting sprayed, but removals are a great learning opportunity for new beekeepers – it gives us a chance to see how bees construct their homes in the wild. Also, Phil noted, the removals are fun as a social gathering with refreshments and discussion afterward.

Education & Youth Scholarship Program: Peter noted that we had announced our Beginning Beekeeping graduates at the beginning of the meeting and went on to report on our Youth Scholars' progress. All have their equipment ready for bees. Gottfried said that his mentee, Rylea Shan, is ready with all her mediums: she has painted flowers on her hive boxes to welcome her bees. Gottfried gave her frames of drawn comb to help her bees get going fast. Cody said that he and his mentee, Adam, have their gear ready and have figured out where to put his hive: Adam lives in a very wooded area, so his bees will have a shade challenge. Peter reported that he heard from mentor William Pittman that our third Youth Scholar, Emily, also had her hive boxes assembled, painted, and was eagerly awaiting her bees. For photos of our Youth Scholars, see the "Youth Scholarship Update" page below!

Community Outreach: Community Outreach Coordinator Bill Barr announced that the Spring Youth Fair is coming May 6 and 7, and LCBA has a table reserved in the Exposition Hall again. He called members' attention to our sign-up for volunteers. LCBA members who volunteer receive complimentary tickets and parking passes for the Fair. We will have the observation hive and some neat activities for kids, including a "make your own bee bracelet" table. If anyone has ideas about our exhibit, please let Bill know (email community@lcba.community).

Youth Scholarship Update: The Adventure Bee-gins!



All 3 of our 2017 LCBA Youth Scholarship students have assembled their woodenware, picked up their bees, and hived them. Emily and Rylea opted for Italians; Adam went for Carniolans. Pictured, left, Emily and mentor William Pittman with her newly assembled (and painted) woodenware; below, mentor Gottfried Fritz helps Rylea Shan assemble her woodenware at VP Bob Harris's shop & Adam prepares to hive his new bees! Adam's mentor is Cody Warren, our YouTube editor.

Our 2016 Youth Scholars, Sam & Josiah, both lost their bees, as many of us did during this tough, long, cold, wet winter. However, both are continuing with beekeeping! Sam & dad Brian bought bees & hived them successfully. Josiah is still working with Gottfried, who is going to work on getting swarm bees for him.

Finally, our first ever Youth Scholar, Joveanie Montalvo, came to our April meeting & rejoined LCBA. Joveanie's original colony is still going strong, & now his sisters are beekeepers, too.

Bee-low, Rylea Shan building a telescoping cover with help from mentor Gottfried Fritz; right, Adam holds up his package Carniolan bees before hiving on bee pickup day.



RECIPES OF THE MONTH ~ NATIONAL HONEY BOARD:

Sweet & Sour Chicken Wings

Ingredients:

- 3/4 cup - honey
- 3/4 cup - diced sweet red peppers
- 1/3 cup - rice wine vinegar
- 1/3 cup - pineapple juice
- 3/4 teaspoon - garlic salt
- 1/2 teaspoon - bottled hot pepper sauce
- 1-1/2 lb. - fresh chicken wings



Directions:

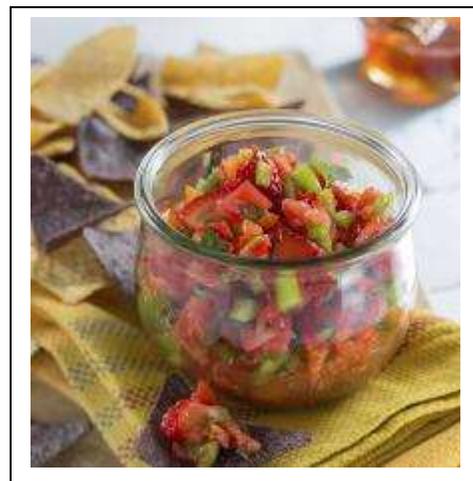
Combine honey, peppers, vinegar, pineapple juice and seasonings in small saucepan; mix well. Cook and stir until mixture begins to thicken. Pour over chicken wings in baking dish. Bake at 350°F for 20 minutes or until wings are glazed with sauce.

Tip: You can use pre-cooked baked or fried wings with this sauce and reduce cook time to 10-12 minutes.

Honey Strawberry Salsa

Ingredients:

- 1-1/2 cups - diced sweet red peppers
- 1 cup - sliced fresh strawberries
- 1 cup - diced green bell peppers
- 1 cup - diced fresh tomato
- 1/4 cup - chopped Anaheim pepper
- 2 Tablespoons - finely chopped cilantro
- 1/3 cup - honey
- 1/4 cup - fresh lemon juice
- 1 Tablespoon - tequila, optional
- 1/2 teaspoon - crushed dried red chili pepper
- 1/2 teaspoon - salt
- 1/4 teaspoon - pepper



Directions:

Combine all ingredients in glass container; mix well. Cover tightly and refrigerate overnight to allow flavors to blend.

Serving Suggestion: Serve on grilled fish or chicken.

“The Bee Dancer,” by Larry Kerschner

LCBA member Larry Kerschner’s poem was chosen to be included in State Poet Laureate Tod Marshall’s state-wide poetry anthology, WA129, which includes a poet for each year of Washington statehood. Congratulations, Larry, & thanks for sharing your poem with us!

The roof line is set
the new bee hut is square and level
open faced to the southeast
when the bees arrive
in a few weeks
I shall dance a bee dance
of welcome
by April my bare feet
may be able to raise some dust
where now there is mud
intoning a poem about bees
my fat belly jiggling
over skinny legs
I will attempt to waggle appropriately
to show them the way

BEES IN THE NEWS



Bumblebees may come into contact with pesticides when foraging or nesting (photo, Royal Holloway University of London)

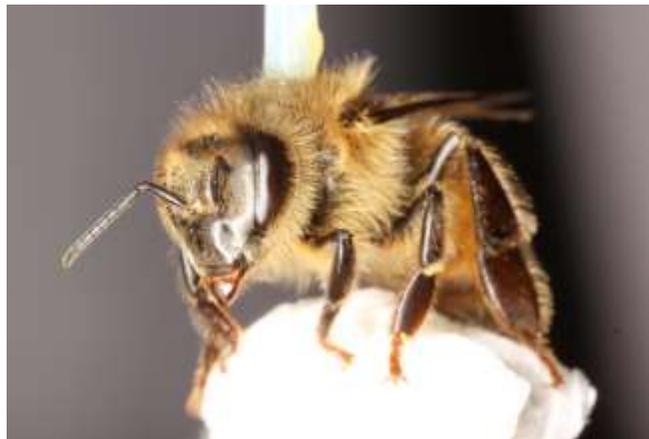
“Bumblebees: Pesticide 'reduces queen egg development'”: *BBC News*, May 3, 2017

British entomologists have found that thiamethoxam, a common neonicotinoid, drives down the egg development of bumblebee queens. Thiamethoxam, one of the neonicotinoids restricted by the European Union, was investigated in 4 separate bumblebee species, taken from the wild and then tested in lab conditions designed to mimic pesticide exposure in the bees’ natural

environment. 2 weeks later, 2 of the 4 species were consuming less artificial nectar, and all 4 showed negative effects on egg development.

"We consistently found that neonicotinoid exposure, at levels mimicking exposure that queens could experience in agricultural landscapes, resulted in reduced ovary development in queens of all four species we tested," said lead researcher, Dr Gemma Baron of Royal Holloway University of London." Researchers think that these effects will mean that exposure to thiamethoxam in the wild will lower the bumblebee population.

When pesticides are assessed for risks, wild bumblebee queens don't usually get taken into consideration, though these queens are more vulnerable to environmental risk than are honey bee queens. This is because bumblebee queens hibernate alone through the winter and then must forage to feed themselves in spring until their first generation of spring eggs – a “few hundred daughter workers” - hatch to feed them. The scientists report that “bumblebees are in decline globally, due to threats from pathogens, loss of habitat and pesticides.” To read more, visit: <http://www.bbc.com/news/science-environment-39783990>



“A honey bee (Apis mellifera) is harnessed for study on a flight mill in biology professor James Nieh's laboratory, UC San Diego”: Credit: Simone Tosi

“Common Pesticide Damages Honey Bee's Ability to Fly”: *American Bee Journal*, April 26 2017

Thiamethoxam is also the star pesticide in a new study from the University of California - San Diego, where entomologists have shown that “field-realistic” doses of this neonicotinoid damage the capacity of healthy honey bees to fly. The scientists noted that earlier studies demonstrated that when bees ingest these pesticides – commonly used on crops like wheat, corn, and soybeans - the bees “were less likely to return to their home nest, leading to a decrease in foragers.”

Researchers tested their theory about the impact of pesticides on bee flight by making a bee flight mill so that they could “fly bees under consistent and controlled conditions. . . . Months of testing and data acquisition revealed that typical levels of neonicotinoid exposure, which bees could experience when foraging on agricultural crops--but below lethal levels -- resulted in substantial damage to the honey bee's ability to fly.”

To read more, visit: <http://mailchi.mp/americanbeejournal/abj-extra-april-26-2017-common-pesticide-damages-honey-bees-ability-to-fly?e=e9ff21e0bb>



Cover of Bee World – Art by Keith Delaplane, IBRA Council Member

Honey Bees – The Super-Organism! A Special Issue of *Bee World* (from Fran Bach’s “Items for Beekeepers”)

Beekeepers will want to read Volume 94, Issue #1, of *Bee World*, which explores the honey bee’s status as a “superorganism . . . an organism consisting of many organisms . . . the term is often used to describe a social unit of eusocial animals such as honey bees, stingless bees and bumble bees, which have highly organized division of labour, and where individuals are not able to survive by themselves for any length of time.”

A wide array of articles are available online at <http://www.tandfonline.com/toc/tbee20/94/1?nav=tocList>

Included are articles about:

- Sweat bees and carpenter bees as early examples of social evolution;
- How colony behavior “outweighs” the actions of individual honey bees in actions like “thermoregulation, initiation of comb construction, cell construction, and the patterns of cell use for rearing brood and food storage”;
- How bumble bees learn by watching what other bees do;
- “Social immunity in bees” – and more!

A New Use for Honey Bee Venom – “Making a ‘beeline’ past the blood-brain barrier for drug delivery”: *Bee Culture*

“Most medicines can’t get through the blood-brain barrier (BBB), a highly selective membrane that separates the circulatory system from the fluid bathing the brain. Certain peptides in animal venoms, however, can navigate across it to inflict damage. Now, researchers are capitalizing on venomous sneak attacks by developing a strategy based on a bee-venom peptide, apamin, to deliver medications to the brain.” To read the article, visit: <http://www.beeculture.com/catch-buzz-making-beeline-past-blood-brain-barrier-drug-delivery>



“Magnetic buzz magnetizing a honey bee” (Bee Culture)

“Honey bees navigate using magnetic abdomens”: *Bee Culture, April 15, 2017*

Canadian scientists have discovered that honey bees have a “magnetic structure in their abdomens” that they can use to perceive magnetic fields. In their tests of bee behavior, they found that “this sensory ability can be disrupted using a strong permanent magnet.” Other creatures use magnetic fields to find their way around – including “some rodents, birds, fishes, reptiles, bacteria and insects.” However, scientists are still working to learn what “mechanisms of “magnetoreception” . . . make this navigation possible.”

Some of these organisms “contain magnetite – a ferromagnetic oxide of iron that is also found in some types of rock,” and earlier studies documented “that honey bees respond to local magnetic fields in a way that is consistent with magnetite-based magnetoreception.” The new study has proven that honey bees have “a ferromagnetic material consistent with magnetite . . . in [their] abdomen[s].” When the researchers “magnetiz[ed] the abdomen of a live honey bee, [it] disrupt[ed] its ability to navigate using local magnetic fields.” More research investigating the details of this magnetic effect is planned.

To read more, visit: <http://www.beeculture.com/catch-buzz-honey-bees-navigate-using-magnetic-abdomens>

“Wax Worms to the Rescue!”: *American Bee Journal*

We beekeepers think of them as pests – but it turns out that wax worms can biodegrade polyethylene – and fast, the Spanish National Research Council (CSIC) has shown. Annually, around the globe, people produce 80 million tons of polyethylene: very hard to break down, taking “around 100 years to decompose completely, with the toughest, most resistant ones taking up to 400 years to break down. Every year, the average person uses more than 230 plastic bags, generating more than 100,000 tons of this type of plastic waste.” The researchers found that “100 wax worms are capable of biodegrading 92 milligrams of polyethylene in 12 hours.”

How do wax worms accomplish this? After they emerge from their larva stage, they enfold themselves in a cocoon – and just putting that cocoon “in contact with polyethylene [makes] the plastic biodegrade.” It turns out that beeswax and polyethylene are constructed similarly, so it makes sense that the wax worms, so good at breaking down beeswax, can break down polyethylene, too.



“This is plastic after being biodegraded by 10 worms for 30 minutes”

(photo, CSIC Communications Department)

The researchers say that "We still don't know the details of how this biodegradation occurs, but there is a possibility that an enzyme is responsible. The next step is to detect, isolate, and produce this enzyme in vitro on an industrial scale. In this way, we can begin to successfully eliminate this highly resistant material."

The lead researcher on this project is also a hobby beekeeper; she put wax worms that she found on drawn comb frame that she had stored into a plastic bag - " After finishing, I went back to the room where I had left the worms and I found that they were everywhere. They had escaped from the bag even though it had been closed and when I checked, I saw that the bag was full of holes. There was only one explanation: the worms had made the holes and had escaped. This project began there and then," she said.

To read more, visit: <http://mailchi.mp/americanbeejournal/abj-extra-april-24-2017-wax-worms-to-the-rescue?e=e9ff21e0bb>



“A female alkali bee visits alfalfa flowers for pollen and nectar” (photo by Jim Cane)

“Bee ‘Bed and Breakfast’ Gets Helping Hand from Science”: *American Bee Journal*, April 21, 2017

In the alfalfa fields outside Touchet, WA, scientists are looking for “new clues to improve the lives of the crop's chief insect pollinator: the alkali bee,” which actually “outperform[s]” honey bees. Farmers in this part of the state keep “open soil parcels called "bee beds" to encourage female alkali bees to dig their nests and raise their young, ensuring generations of pollinators for seasons to come. In turn, that leads to increased yields of alfalfa seed, which is sold to grow premium hay for dairy cows and other livestock.”

One acre of nesting beds produces alkali bees that can “pollinate 100 or more acres of alfalfa, resulting in a harvest of about 100,000 pounds of seed,: according to Jim Cane, USDA entomologist based in Logan, Utah. In 2016, Cane “teamed with soil hydrology specialists from Pullman, Washington” to research how the female alkali bee reproduces and what affects that reproduction: water vapor flow from soils into the underground bee nests seems to make the difference, and now scientists want to measure the balance: “larvae . . . need enough moisture to keep their chambers from drying, but not so much that molds grow and ruin the pollen provisions.”

To read more, visit: <http://mailchi.mp/americanbeejournal/abj-extra-april-21-2017-bee-bed-and-breakfast-gets-helping-hand-from-science?e=e9ff21e0bb> .

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)