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June 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

Thursday, June 8: LCBA Monthly Meeting

Honey: Supering for Honey Production; How Honey is Judged at Fairs

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

Speakers: Education Coordinator Peter Glover will explain the process of judging honey at the Southwest Washington & other fairs; Mentor Steve Howard will share techniques & tips on honey supering. We will have Queenline Jars available for members wishing to show their honey at the Fair this summer. Also, Beekeeping Q&A and brief business meeting.



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 links under “Short Course,” above.



Above left, Shelter #2 at Lintott Alexander Park; right, Kimo Thielges & Kevin & Barb Cearley enjoying food & fun items won at the drawing to support our Youth Scholarship Program.

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

Come enjoy good food, good fellowship, & talk bees. Honey recipes always welcome!

When & Where: 4-8 p.m., Lintott Alexander Park, Shelter #1; 1101 Riverside Dr, Chehalis

Facilities: We'll have 10 large picnic tables & benches (altogether, facility can accommodate 100), wood-burning stove, electrical outlets, outdoor faucet, garbage cans/liners.

Please bring: A dish to share, plate, cutlery – and family! LCBA will provide water, pop, napkins. Park management requests no alcohol at this event.

Drawing for 2018 Youth Scholarship Program: Bee gear, gift certificates, & fun items will be available for those who buy \$1 drawing tickets. We'd like to branch out to middle schools next year & fund more young people to get started with bees. If you'd like to help, please consider bringing an item to donate!

Saturday, July 15: Removing Honey Supers Safely / Testing & Treating for Varroa Mites



Above left, LCBA members assessing honey frames at last year's supers removal workshop; right, Treasurer & Journeyman beekeeper Rick Battin demonstrates the sugar-shake method for Varroa testing.

When: 10 a.m. to noon

Where: Please RSVP to secretary@lcba.community for location & directions.

What: For those who are getting ready to remove supers for the first time – or who have done it before, but would like to see alternative methods – we'll demonstrate the fume board, bee escape board, blower, & "brush & run" methods. Tips on honey storage, too. Also: how to test for mites using not just the slider board, but the sugar shake and alcohol methods. General bee Q&A & refreshments to follow.

Saturday, July 29: Honey Extraction Workshop



Scenes from our 2016 Honey Spinning – first, you uncup; then, you load the extractor; next, you spin; finally, you harvest your honey! It all goes faster with a little help from your friends.

When & Where: Times & Location TBA

What: If you'd like to show your honey at the Southwest Washington Fair – or just want to have some of your girls' product to enjoy – but don't have extraction gear, this workshop is for you! Honey extraction will be by appointment – LCBA members can sign up at the July 8 potluck, or email secretary@lcba.community. There'll be 3 uncapping/spinning stations & 3 different time slots. Visitors are welcome, but only LCBA members can use club extractors & equipment to extract honey. Limit: 2 honey supers. If you can't make these dates but want to spin honey, contact Susanne & we'll see what we can work out for you.

Some Longer-Term Upcoming Events ~ Mark Your Calendars!



Thursday, August 10: LCBA Monthly Meeting

Dr. Danny Najera: Mite-Busting! Strategies for Combatting Varroa in Your Apiary

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, October 12: LCBA Monthly Meeting

Kevin Reichert: Preparing Your Bees for Winter

Thursday, November 9: LCBA Monthly Meeting

Dan Maughan: Commercial Pollination – Bringing Bees to the Almonds, Apples, & Cherries

Saturday, December 9: LCBA's Holiday Potluck: more details later!

THURSDAY, MAY 11 ~ LCBA Monthly Meeting Notes:

LCBA mentor Phil Wilson kicked off this meeting with an overview of the “Bee Gym” – Dadant’s new way to treat for Varroa mites. Phil commented that when you hear the words “Bee Gym,” you might envision the bee on the left, below. In fact, the Bee Gym is a new device (see middle photo): you can insert it into a hive to encourage the bees to engage in hygienic grooming behavior (see photo on the right). It works best in combination with a screened bottom board so that mites removed by the bees fall through. Phil showed a film of the bees rubbing their bodies against the gym and each other to give an idea how it works: to view it, visit this YouTube link: <https://www.youtube.com/watch?v=EeHZMlh7c8o> .



Above left, Phil’s slide from “Bee Movie”; middle, the Dadant “Bee Gym”; right, the bee gym placed in one of Phil’s hives.

The Bee Gym is available from Dadant for \$17: Bayer developed the Varroa gate, though their version had chemicals and also scraped pollen off the bees’ legs.. Phil was asked if there have been any studies of the Bee Gym: Phil said that he is not sure, but he has heard from one beekeeper that they do make a difference, as well as from a beekeeper who saw no difference. Gottfried Fritz wondered if using queen excluders could have a similar effect. Phil noted that Varroa mites are the perfect predator: not only do they smell bees, but they know the smell of larva. Kevin Reichert asked how many members have already treated for mites this year: about a third present had.

Speaker: Rev. Alan Woods: Queen Rearing & Evaluating Brood Patterns

Kevin introduced Alan Woods, an LCBA member, local pastor and beekeeper. Alan said that his church is not as big as LCBA’s monthly gathering, “so this is a treat.” Alan has been keeping bees for six years; he also works at Fort Lewis with inmates and teaches them beekeeping. He’s tried some new things that have worked, though he does not see himself as an expert. He listens, then tries things to see if they work, so Alan commented that he is here as a peer to learn from us, also.



Reverend Alan Woods of Woods Bees, our May speaker; Woods Bee Co., 610 State Street, Centralia WA 98531; 360 623 3359; bees@woodsbeeco.com.

Alan noted that in preparing his talk for tonight, his computer didn't do what he wanted it to do: beekeeping is similar because when you keep bees, they don't always do what you want. Alan asked why so many of our bees are not making it through the winter. We figure on 20 to 30 percent as an acceptable loss, but would we accept that level of loss in our cattle in the U.S.? Some say that new beekeepers are the reason the high loss rates; Alan believes that an education program is crucial because it will help new beekeepers over-winter colonies.

Having a successful hive means having a good queen: Alan maintains 30 colonies at three different apiaries and has two mating yards with at least 20 queens going at any given time. Often, we panic if we look in a hive and don't see a queen. It's good to have a nuc going at all times so as to have queens on hand. We can do this too, Alan says. If we think of our bees as a community with the queen as the central focus of hive, we will understand our role caring for them a little better. It's not enough to have a queen – we need a well-produced queen, who will strengthen the overall health of hive by laying a strong brood pattern:



Above left, a queen with a strong retinue (BeeInformed); right, a solid brood pattern (Susanne Weil)

Queens and Colony Temperament: Also, Alan pointed out, a good queen leads to a good colony temperament. Alan asked if anyone had a hot hive: they're not fun to work, though they often give good honey, Kevin said. Alan once had a hot hive that he eventually requeened: two months later, it was a totally different colony because of the new, gentler queen.

Queen Cells: Swarm or Supersedure? Next, Alan reviewed queen bee biology, summarizing how workers infuse royal jelly into a cell with an egg or very young larvae, rich in protein and sugars, which kick-starts the developing worker's ovaries and turns her into a queen. Queen cells are easy to identify: they point down and are drawn out long, like a peanut. What do you do when you see a queen cell, Alan asked; VP Bob Harris said, "You assume the worst!" Alan

noted that just as in politics, the workers can vote out a leader they don't like, in bee colonies, workers control the hive. If they are raising a new queen, they will have a reason, whether to swarm or supersede an aging queen.

Kevin and Gottfried noted that the key is assessment: you should look to see if there is an egg or larva in that queen cell. A swarm cell will be at the bottom of a frame: it is the bees' natural way to increase colony numbers, and if the beekeeper wants to prevent a swarm, the cells can be scraped off (though by the time you see swarm cells, they may be determined to leave). If the cell is in the middle of the frame, that's supersedure: the queen could be old, sick, or injured. The bees are a community, so they know what is wrong. Alan pointed out that hardly anyone marks their queens, but it's important to do so that you know the age of your queen. "How many of you name your queens?" he asked; "I do." As an aid to marking queens, Alan displayed a tool that looked like a clear glass pipe: a new kind of queen catcher which you place over the queen, then plug with a soft sponge once she crawls up inside.



Above, left, supersedure cells (Susanne); middle, swarm cells (BeeSource); right, tobacco pipe-style queen catcher (Amazon)

Why Having a Well-Mated Queen Matters: Alan cautioned, don't be content just because your bees build a new queen. The big question is: will she be mated well? The beekeeper must check her brood pattern to see that she is a good queen. Don't just settle for having any old queen, Alan urged: replace queens who are not productive enough. Alan asked how many of us have small queens in our hive: that's a problem, he pointed out, because bigger queens lay more eggs. Better mated queens have bigger retinues. Diverse mating makes a healthier hive. A solid brood pattern shows genetic compatibility between the queen's eggs and stored semen.

To raise queens, it's important to understand queen development: Alan showed a diagram of the three days the developing queen spends as an egg, four as a larva, and 8 to 9 as a pupa. If you want to split a colony and make the bees raise a new queen: find eggs. On their mating flights, queens will mate up to 14 drones in flight. Some say that you can even hear the drone congregation zone. Some say it isn't fair that females do all the work and all drones do is mate: Alan showed a photo of a dead drone, saying, "*That's* not fair."

Once the queen has emerged and been mated, she will continue to develop, so the beekeeper must make sure that the bees are feeding her, or feed sugar syrup. Kevin noted that if you feed too much, the bees can backfill the brood chamber: if you feed, be sure you don't overfeed and thus retard the queen from laying. Alan agreed, noting that this is called a hive getting honey-bound, a swarming risk and can make them swarm: "no place to lay, no place to

stay.” Gottfried noted that sometimes a brood chamber can also get pollen bound, leaving no room to lay. Alan suggested that this is another reason to maintain nuc colonies, so that you can switch those frames out.

The Silverdale Queen Rearing Class: Several years ago, Alan attended the Silverdale Queen Rearing course led by the West Sound Beekeepers: it was spendy, but worth it because it made him think differently about bees and beekeeping. (*Silverdale’s 2017 class took place this spring; there will be another in 2018.*) An old saying goes that the queen is 60% of your hive, the bees 20%, and the other 20% is you, because you take care of the bees. You have to do your 20%.

Grafting Cells to Make a Queen: Ways to graft include using natural swarm cells, emergency queen cells, or the Doolittle grafting method. Non- grafting methods include the Miller Method, the Alley Method, or the Jenner system. Alan said that these are tedious to explain: the class he took was two days long, so if you want to learn the details, Alan recommends the Silverdale class, as well as Larry Connor’s book, *Queen Rearing Essentials*. To make the bees raise a queen, Alan uses a ten frame box called a cell builder colony and takes its queen out when lots of bees have built up. If they are queenless and closed up for at least 48 hours, that works best for him: he closes up the colony with a screen and gives them a water source. If anyone wants to see this, he would be glad to have people visit his apiary so that he can show it. Alan pointed out that if you use this method, you want to make a lot of queens, not just one or two, and feed them well, with both syrup and pollen patties.



Left, one of Alan’s 10-frame cell builder colony boxes; right, frame of developing queen cells (photos from Alan’s PowerPoint show)

Grafting is Alan’s preference: it is not an easy task to do by hand, though. If you flip the larva over, it will drown when fluid gets into its sphericles; the bees then will pull it out. Starting with grafting, you can expect about a 25% success rate. Bob commented that this beats a 20% loss! Alan noted that kids are good at grafting, with those young eyes and nimble fingers. He has had his daughter help him: this is also another way to get your family involved in beekeeping that can be less intimidating than being around flying bees.

Alan showed a photo of his breeding apiary with three nucs side by side, about a foot apart, up on a stand. He also has mini-mating frames in 5 to 10 frame mini-mating nucs. Gottfried asks whether the larvae have to be in the first 3 days when you graft: Alan says yes. Gottfried asked whether a warm temperature is really critical at that time: will the egg stay stable

longer than if you are grafting in 60 degree weather? Alan said yes: he would not even try in weather in the 50s.

The hardest thing, Alan noted, is getting the egg out of the cell and into a cup. It is easier with new larvae, so small that they look like little question marks. It has to have royal jelly already, which means they have already accepted this new queen and taken care of it. One attendee noted that she used hot towels around her hive to help keep them warm when she is grafting. Cody wondered how big the mini-nuc frames are: Alan said they are about 6 inches. He does not like the small deck of cards type: he wants to see how the queen lays so that he can see the brood pattern. Kevin noted that as in so many things about beekeeping, timing is critical: if you are after production, you need to make new queens or splits early in spring.



Alan's breeding nucs

What Traits to Breed For? Kevin asked what Alan is trying to breed for, genetically: Alan said temperament. He has bees that fight yellowjackets - now that's genetics he wants to preserve! He also looks for hygienic behavior against mites. Many commercial beekeepers automatically re-queen every year, not waiting for them to fail. Kevin noted that our California queens tend not to last: we are lucky to get two to three years out of them. Alan agreed, and said it would be better to rear local.

Nancy Toenyan said that she has gotten excellent queens from Laurie Miller in Roy, mainly Carniolans; she's had them for a couple of years. A nuc that she bought in July 2016 had two full boxes in this May, despite how our spring has been. Alan noted that Laurie also sells queen cells. ***(To contact Laurie Miller / Miller Compound HoneyBees and Agriculture, call (253) 843-1319 or email jloutdoors@aol.com.)***

Timetable & Dangers of Letting Colonies Rear Their Own Queens: Kevin noted that if you want to let colonies breed their own queen, this is also a timing issue: you need to allow about three weeks, and the process still can fail. The emerging queen can be eaten by bird on a mating flight, but if you can raise own, those local queens can be the best stock. Dan Maughan asked what would be the latest Alan would re-queen in Lewis County. Alan said that in the Silverdale class, they had a chart with the last day queen would mate. There have to be available drones unless you are inseminating the queen artificially.

Grafting Timetable: Alan shared a chart mapping grafting day by day: day 1, egg laid; day 3, larva hatches out; day 4, graft larva into queen cell; day 8, queen cell is capped; day 14, install cell in mating nuc; day 16, virgin queen emerges; day 20 to 25, virgin queen mates; day 25 to 35, queen starts laying; day 40, queen is ready for transfer. Day 14 is critical, Alan noted, because

you must get the queen out of the nuc before she hatches, or she will kill all the other queen cells. Alan asked if anyone had ever put a queen in a hive, only to have her get killed: a number had. But 98% will accept a new queen, Alan said. He also pointed out that some will take the queen out at day 35, but Alan wants to wait a few days to see what her brood pattern is like. Alan pointed out that queen rearing is not as hard as it sounds: anyone in this bee group can have a queen on hand this way.

Comments, Questions, & Answers: A new member commented that the bees he bought from Alan are great: a yellowjacket tried to get in, and they tore it to pieces: “it was fun to watch.” Gordon Bellevue asked if Alan has a commercial storefront so that we can find him: Alan said watch for the big trailer with an American flag and a bee on the door. Buck asked whether Alan carries the pipe style queen traps, which Alan passed it around; he doesn’t sell them, but Kelly Beekeeping does. It looks like a cross between a pipe and a toothbrush (some suggested that it looked as if it came from a paraphernalia shop. . . .).

Bob asked if there is a specific genetic trait for queens concerning when they lay drones: Alan said that there is, and that some are better at it than others. One is from Hawaii, a bigger Carniolan, and one comes from an island off Germany, bred to be a pure genetic line. Bob commented that some queens are better than others, and also, some drones are better than others: is there a trait in the queen that will produce friskier drones? Alan wasn’t sure and suggested asking Laurie Miller.

Finally, Kevin announced that Alan’s daughter just won Miss Lewis County. Everyone congratulated Alan, and Kevin thanked him for a very interesting talk.

May Business Meeting Notes

Garden Top Hive Covers from Lewis County Work Source: LCBA President Kevin Reichert opened the meeting with an announcement that most of the Garden Top Hive Covers that members ordered from Lewis County Worksource were available for distribution. However, Worksource lost an employee, so rest of the tops are backordered, but coming soon. Kevin will contact members still waiting for their hive tops when they are available.

Tomatoes! Mentor Steve Howard brought tomato plants to share with members after tonight’s meeting. Steve said that his bees are not doing so well; he only has supers on four so far, whereas this time last year, he had supers on 16. However, his greenhouse has done well, so he brought four dozen tomato plants to give away: Brandywines, Oregon Spring, and more.

New Beeks? Kevin asked how many new beekeepers were at the meeting: we had a full house and many were first year beekeepers. One member noted that during the first couple of days post-hiving, he was worried not to see them flying much, but now they are. He built a lean-to for their shelter. Kevin noted that it had been a tough winter and prolonged rainy spring, which has slowed progress of new packages and nucs, as well as buildup for over-wintered bees; he lost a third of his own bees. Many members who over-wintered bees had heavy losses.

Bee Pickup Day Review: Kevin he thanked the members who volunteered to help out: Dan Maughan, Rick Battin, Chris and Christopher Arhutick, Martin Stenzig, Cody Warren, Gottfried Fritz, Bob Harris, Grant Inmon, Peter Glover, and Susanne Weil. Dan and Kevin looked through many of the packages and nucs before giving them out, as time allowed. Kevin acknowledged that the morning was “trying”: the bees arrived two hours late because Harold’s supplier in California was not ready on time. About 200 people were lined up at Beeline to pick up their

bees in the morning, with cars backed out to Moon Road! At one point, Kevin thought they might have to transport bees from the casino. The situation was made a lot more pleasant by Harold Weaver and his family, who put on free burgers, hot dogs, and pop for those picking up bees; volunteers from the Mennonite Church held a bake sale with delicious pies, so a good time was had by all, except Dan & Kevin, who went home a bunch of stings.

Steve Grega offered thanks to the volunteers for all their work; he noted, however, that it looked like the bees in his nucs had been in those transport boxes for quite a while, as they had built comb in them. Steve also noted that there was no syrup left in the feed cans on the 4 pound packages. Kevin said that the 4 pounders had been picked up a day early. He and Dan observed the empty syrup cans too, and had urged members to hive and feed their bees ASAP, as weather permitted; a message went out via email about this to try to prepare beekeepers. Also, the California vendors sent the extra queens that had been ordered inside the packages! This meant that some members went home with 2 queens inside; some called Harold and paid for them. Otherwise, Kevin noted, packages were excellent this year. There were also some nucs that had a blank frames, though overall, reports were that the nucs were building up well.

Treasurer's Report: Rick Battin reported that LCBA's main account has \$10,042.37; our Youth Scholarship fund has \$1,222.35. Rick filed our 990N form with the IRS with the statement that we made under \$50,000 in 2016.

Community Outreach: Kevin announced that Bill Barr, our Community Outreach Coordinator, has had to resign because of conflicts with his work schedule; Kevin thanked Bill for his work in this role and asked members interested in serving on the board to contact him. Bill announced that the Spring Youth Fair had gone well and thanked all our volunteers – see the feature story and photos from the Youth Fair later in this Newsletter.

Bee Talks To Local Groups: Also in community outreach, Vice President Bob Harris gave three “bee talks” over the past month. The first was two one-hour classes at the Chehalis Basin Education Summit, where curious kids asked good questions. At the Juvenile Detention event, Bob had 16 students for 3.5 hours who were very engaged: Bob is on their speaker's list now and expects to go back. Finally, Bob spoke to a home school group and recognized several students from the Farmer's Market. Bob reported that some already are LCBA members; one child did a bee biology presentation that was pretty good!

Earth Day “March for Science” in Chehalis: Susanne reported that despite the rain, about 100 people came, and the organizers appreciated LCBA's informational materials, seeds to give away, and photo hive. Members Gillian Davis and Courtney Thompson, as well as one of our students from the beginning bee class, helped out and a good, if moist, time was had by all.

Club Apiary: Bob announced that now that dry weather has finally made an appearance, he is working on prepping the ground for the LCBA club apiary, which he is hosting at Rose of Sharon Farm. By next week, we will have cinder blocks and posts: Kevin noted that the board approved Bob to buy the 4x4 posts, but other than that, few expenses so far. Bob will buy some hog fuel for around \$120 to help with ground preparation. He will put out a call for volunteer help soon, so “stay tuned.” 3 Nucs have been donated by Kevin Mills and will be at the farm as soon as available. We hope to have the new club apiary open this summer.

Mentor Program: Dan announced LCBA's first workshop of 2017 on May 20 at his apiary – our long, wet spring has delayed our workshops, but we will get back buzzing on the 20th with

hive inspection techniques and a splits demonstration (those who want to come were asked to RSVP by email to Susanne for the directions). For details and photos from the workshop, see the feature later in this Newsletter. Dan announced that so far, 36 members have asked for mentors, and 21 members are mentoring. If any member who does not have a mentor would like one, please email Dan at ultramafic@netzero.net.



LCBA's Youth Scholarship students in action: above, left, Rylea Shan puts on a 2nd box as Gottfried guides her; middle, Adam holds up a nice frame of bees & brood at his last inspection with mentor Cody; right, Rylea Shan & Emily at LCBA's May 20 workshop.

Education & Youth Scholarship Program: Gottfried reported that his Youth Scholar, Rylea Shan Powell, has her bees on drawn comb. Rylea was present and said that not only she, but her siblings are having a lot of fun with her bees. Gottfried also noted that he divided one of his colonies and gave it to his 2016 Youth Scholar, Josiah Cowin, who is happy to have bees again. Youth Scholar Emily Ecklund was also present: she reported that her bees are in good shape with a lot of brood and honey capped already. On the other hand, her mom Michelle's hive hardly had any brood, so they were concerned, and mentor William Pittman was going to come look at it with them (post meeting report: it turned out that Michelle's queen had died, and she has re-queened). Cody Warren, Adam Claridge's mentor, reported that Adam had hived his bees, and that on a subsequent check there were 6 frames of brood and lots of pollen from Scotch Broom.

Kevin asked Rylea and Emily, who were present, if they had been stung yet. Gottfried reported that Rylea's brother had gotten stung and had pinched the stinger, making it worse – a warning to all new beekeepers to scrape off the venom sac rather than try to pull it out and make it pulse in more venom. Reta Fleming noted that peppermint essential oil rubbed onto the sting site helps relieve the pain and itching.

Beekeeping Q&A & Miscellany: Dan and Kevin went out to Naches to pick up Dan's bees, who were pollinating apple and cherry orchards. They left Adna around 2 pm, but didn't leave Naches with the bees till around 9 pm. Kevin noted that these commercial orchards use GPS to find individual beekeepers' hives amid their enormous fields. Their return trip over White Pass involved snow and elk, and Dan was up till 4 a.m. getting his bees situated: one hive accidentally got upended when caught at a bad angle by the forklift, so Dan got stung pretty comprehensively by some very annoyed bees. We discussed some beekeeping Q&A issues – your scribe apologizes for not being able to read her own handwriting from the meeting notes.

Finally, member Maureen Harkcom introduced herself: she is the head of the Lewis County Farm Bureau, and she had some brochures to pass out for those who are interested in the Farmer's Market in Chehalis and other activities of the Bureau.

LCBA Talked Bees With Kids at the Spring Youth Fair, May 6th & 7th



Above left, LCBA Youth Scholar Rylea Shan Powell answers children's questions at the Honey Tasting Challenge; right, Rylea's mentor, Gottfried Fritz, helps children find the queen in our Observation Hive.

For the 4th straight year, LCBA staffed an exhibit in the Exposition Hall at the Southwest Washington Fairgrounds to help introduce children to honey bees and beekeeping. Community Outreach Coordinator Bill Barr & Mentorship Coordinator Dan Maughan brought the observation hive, which was again an enormous hit. Tracy Chilelli had a bee-autiful inspiration – the “make your own bee bracelet” stand, which attracted children who from the face painting booth next door to accessorize ☺ Secretary Susanne Weil brought the honey tasting challenge, which was to distinguish Dan's carrot blossom honey from the Giese's orange blossom, Dan's blackberry, & Susanne & Peter Glover's wildflower/blackberry honey. Youth Scholars Rylea Shan Powell and Adam Claridge volunteered at the booth on Saturday – thanks to them & to our LCBA Volunteers (Chuck Ament, Bill Barr, Gordon Bellevue, Tracy Chilelli, Pamela Daudet, Gottfried Fritz, Mel Grigorich, Heather Layden, Dan Maughan, & Susanne Weil). We had many visitors – parents and kids with questions about bees who enjoyed our seed giveaway and other informational displays and materials. Above and bee-low are some photos of the weekend. . . .



Above left, Tracy Chilelli & Heather Layden help children make bee bracelets; middle, kids with their finished bracelets; right, Bill Barr answers questions at the Observation Hive. Below, left, Rylea Shan answers questions; middle, bee bracelet; right, Dan Maughan with visitors at Honey Tasting Challenge.



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



Above left, Youth Scholar Emily & her mom with Peggy Hammer during post-workshop Q&A; right, Dave Bachelor pulls a frame with mentor Cody Warren looking on.

LCBA's 1st 2017 Hive Inspection workshop was great fun! Over 30 new (or nearly-new) beekeepers & 8 mentors inspected colonies specially selected by our host, Mentorship Coordinator Dan Maughan, for various issues that beekeepers need to look for and address: spotty v. strong brood patterns, possible queenlessness, when to add a new box, and more. Dan & Kevin Reichert demonstrated how to split a colony. Finally, we had Q&A over refreshments in Dan's shaded breezeway. Some photos from the workshop are pasted in below; a full gallery is posted on LCBA's Facebook page. Thanks to hosts Dan & Larissa Maughan, as well as to our mentors: Dan, Kevin, Rick Battin, Gottfried Fritz, Mel Grigorich, Cody Warren, Phil Wilson, & Susanne Weil. Thanks, too, to Larissa, Richelle Jackson, Patti Eddy, & others who brought refreshments – and special thanks to Bill Barr for the pop! Hive inspection is thirsty work.

Bee Informed Partnership:

Honey Bee Colony Losses 2016-2017: Preliminary Results Show 21.1% Winter Losses, 33.2% Annual Losses

BIP writes: "From all of us at the Bee Informed Partnership, thank you for taking the time to complete our Annual Loss and Management Survey! Over 4,900 of you entered vital data that continues to enable us to track losses and management practices in the U.S. Please see below for the preliminary results of this survey. It is also available on our website, at www.beeinformed.org."

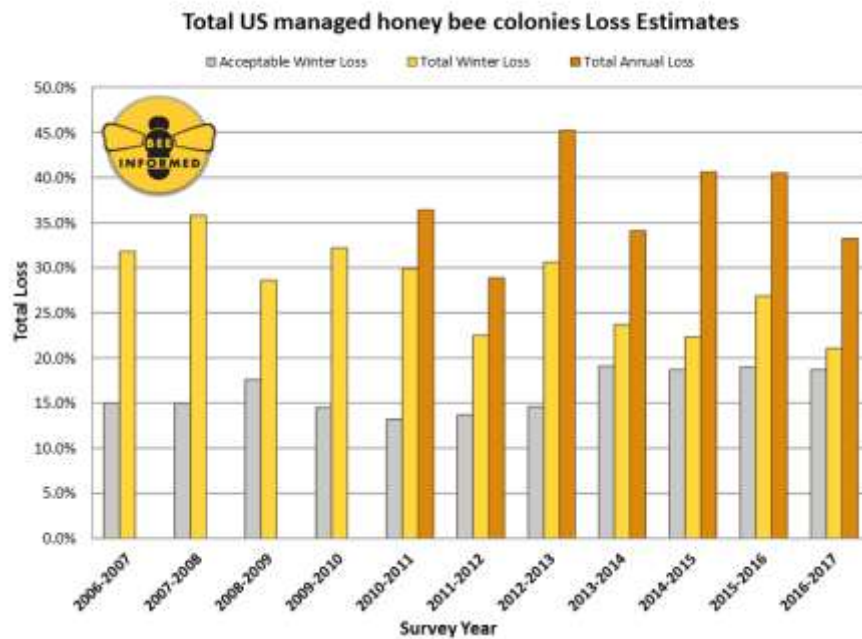
Note: This is a preliminary analysis. Sample sizes and estimates are likely to change. A more detailed final report is being prepared for publication in a peer-reviewed journal at a later date.

The Bee Informed Partnership (<http://beeinformed.org>), in collaboration with the Apiary Inspectors of America (AIA), conducted the eleventh annual national survey of honey bee colony losses.

For the 2016-2017 winter season, 4,963 beekeepers in the United States provided validated survey responses. Collectively, these beekeepers managed 363,987 colonies in October 2016, representing about 13% of the country's estimated 2.78 million managed honey producing

colonies(1). An estimated 21.1% of colonies managed in the United States were lost over the 2016-2017 winter. This represents an improvement of 5.8 percentage points compared to the previous 2015-2016 winter, and is below the 10-year average total winter loss rate of 28.4% (Figure 1).

Beekeepers not only lose colonies in winter (October – March) but also throughout summer (April – September). The 2016 summer colony loss rate was 18.1%. When all the survey results were combined, beekeepers lost 33.2% of their colonies between April 2016 and March 2017. This is the second lowest rate of annual colony loss recorded over the last seven years.



Above, BIP Figure 1: Summary of total overwintering colony losses in the United States across eleven years of conducting the winter loss survey (yellow bars; October 1 – April 1) and across six years of conducting the summer (April 1 – October 1) and annual loss survey. Total annual loss values (orange bars) include total winter and total summer losses. The acceptable winter loss rate (grey bars) is the average percentage of acceptable yearly colony losses declared by the survey participants in each year of the survey. This survey was conducted by the Bee Informed Partnership, Inc.¹ Based on 2016 NASS Honey Report figures (published 2017).

² Previous survey results found total winter colony loss values of 27% in the winter of 2015/2016, 22% in 2014/15, 24% in 2013/2014, 30% in 2012/2013, 22% in 2011/2012, 30% in 2010/2011, 32% in 2009/2010, 29% in 2008/2009, 36% in 2007/2008, and 32% in 2006/2007

RECIPES OF THE MONTH ~ NATIONAL HONEY BOARD:

Sweet Spicy Salmon with Honeyed Mango Salsa ~ National Honey Board

Ingredients:

1 large - ripe mango, peeled and chopped
1/4 cup - red bell pepper, finely chopped
1/4 cup - red onion, finely chopped
2 Tbsp. - fresh cilantro, chopped
2 Tbsp. - fresh lime juice, divided
1 Tbsp. - honey
1 small - jalapeno pepper, seeded and minced
1/3 cup - honey
2 Tbsp. - Mexican hot sauce
4 (4 to 6-oz.) - salmon fillets

Directions:

To prepare the salsa, combine the mango, bell pepper, red onion, cilantro, 1 tablespoon of lime juice, 1 tablespoon honey and jalapeno in a medium bowl. Stir well and refrigerate until ready to use. Whisk together the honey, hot sauce and remaining lime juice in a small bowl. Rinse salmon and pat dry; brush liberally with honey mixture. Place skin side up on a well oiled grill over medium coals; cook for 2 to 3 minutes until lightly charred. Turn and cook for 8 to 10 minutes more, basting liberally with sauce during cooking. Remove from grill and transfer to a serving platter. Top with mango salsa.



Roasted Pineapple with Honey and Pistachios ~ National Honey Board

Recipe by Rozanne Gold; Photograph by Romulo Yanes

Ingredients (4 Servings):

1/2 cup (packed) dark brown sugar
1/2 cup orange juice
3 tablespoons honey
1 medium ripe pineapple, peeled, cored,
& cut lengthwise into 8 wedges
1/4 cup crème fraîche or yogurt
1/3 cup natural unsalted pistachios, chopped
2 tablespoons torn fresh mint leaves

Directions:

Preheat oven to 450°. Line a large rimmed baking sheet with parchment paper. Stir first 3 ingredients in a large bowl until sugar dissolves. Add pineapple; toss to coat. Let marinate, tossing occasionally, for 10 minutes. Place pineapple, one flat side down, on prepared sheet; reserve marinade. Roast pineapple for 15 minutes. Turn, brush with marinade, and roast until tender and caramelized, 10–15 minutes. Drizzle remaining marinade over; let cool slightly. Divide pineapple among plates. Spoon crème fraîche alongside. Garnish with nuts and mint.



Identifying Native Bees: A New Guide from WSU



LCBA Journeyman Beekeeper Terrie Phillips reports: “This publication (EM110E) was sent out to Cowlitz County Master Gardeners originating from the Pesticide Coordinator, Catherine Daniels from the Washington State Pest Management Service of WSU Puyallup. It has some good information regarding all kinds of bees and how to identify them with so good color pictures. I wanted to share with LCBA as it might be fun to ID other bees.” The new 17-page WSU manual “acts as an introductory document for those who would like to understand wild bee biodiversity and contribute to conservation through monitoring.” Although it’s part of the Citizen Science Initiative for Bees in the Puget Sound Region, readers in other geographic regions may find the classification keys, physical and behavior descriptions useful. To read / download a PDF of the guide, visit: <http://cru.cahe.wsu.edu/CEPublications/EM110E/EM110E.pdf>
To read it online, visit: <https://pubs.wsu.edu/ItemDetail.aspx?ProductID=15974&SeriesCode=&CategoryID=&Keyword=em110>

BEES IN THE NEWS

Thanks to Fran Bach, Gillian Davis, Steve Norton, Phil Wilson, & the good folks at Bee Culture & American Bee Journal for sending stories.



“Sick bees explode across the landscape”: Bee Culture’s “Catch the Buzz,” May 5, 2017

Dr. Dennis vanEngelsdorp raised the alarm at the BBKA Spring Convention: beekeepers must control Varroa populations to maintain healthy colonies, especially where colonies are close together. Of the “three key risk factors to bee health . . . varroa mites and associated viruses; pesticides in the field and in the hive; and poor nutrition,” Varroa are the most dangerous,

because “a sick colony explodes into the landscape and infiltrates surrounding apiaries.” His new research suggests that “mites feed off the fat rather than the haemolymph of honeybees – a factor that is of considerable importance for bees going into winter.”

Survey data showed that “56% of beekeepers had not used varroa-control products in the previous twelve months.” These beekeepers may not realize that their decision not to treat “does not stop at their own apiary.” Test results which Dr. vanEngelsdorp presented at BBKA showed this: researchers “marked bees in an apiary either yellow or blue. Yellow indicated that the colony was collapsing, blue that the colony was healthy. The collapsing colonies duly died out, but their surviving yellow-marked bees exploded like a bomb in the landscape. Those yellow bees were found in almost every apiary in a two-to-three-kilometer radius!” (To read about how the mites accomplish this, see the next story.)

To read more, visit: http://www.beeeculture.com/catch-buzz-sick-bees-explode-across-landscape/?utm_source=Catch+The+Buzz&utm_campaign=ecd445c180-Catch_The_Buzz_4_29_2015&utm_medium=email&utm_term=0_0272f190ab-ecd445c180-256261065

“How Varroa Mites Take Advantage of Managed Beekeeping Practices: Closer colonies and less swarming allow mite populations to grow and spread”: *American Bee Journal*, May 9, 2017

This next story suggests how Varroa mites “explode across the landscape.” New research suggests that mites “have ‘co-opted’ several honey bee behaviors” so that even though mites can’t travel far on their own power, they can “hitchhike on wandering bees,” traveling - with viruses in tow - to infest and infect bees in many colonies. When beekeepers set up many colonies in close proximity, they enable the mites’ agenda. According to Gloria DeGrandi-Hoffman, who leads the research initiative at the USDA-ARS center in Tucson, “Beekeepers need to rethink Varroa control and treat Varroa as a migratory pest.”

It’s been observed that “wild bee colonies tend to survive despite Varroa infestations.” The tendency of wild bees to locate colonies at a distance from each other makes it harder for mites to hitchhike on a forager from one colony to another. Also, the natural tendency of wild bees to swarm “serves as a mechanism for thinning out the density of mite infestations and their associated pathogens.” Not so in many bee yards, where “colonies are kept in close proximity, and swarming is prevented.”

DeGrandi-Hoffman and colleagues “conducted an 11-month study of 120 honey bee colonies in one commercial bee operation, comparing those treated with mite-targeting insecticide (miticide) in the spring and fall with those treated only in the fall, and they found no significant difference in the results: more than half of the colonies were lost across the board. This aligns with what has been seen by beekeepers and researchers alike in recent years: Varroa populations continue to grow even after being treated with effective miticides. But why?”

The researchers think that the mites’ “dispersal mechanisms” may be the reason. They “conducted mathematical simulations of Varroa mite population dynamics to examine the effects of both migration of foragers between colonies and swarming. When bees can wander into other colonies--either to “rob” them of their honey or because they’ve simply lost their way--Varroa populations across colonies climb. Likewise, prohibiting colonies from splintering periodically via swarming also leads mite populations to rise.”

In wild bee populations, the mites seem to have a more normal parasite/host relationship – which makes sense, since killing a colony of host bees when there’s no new colony to jump ship to does not help the mite survive. In a densely packed bee yard, though, the mites can take advantage of drifting and robbing to move from a weakening colony into a stronger, less infested colony.

What can be done? DeGrandi-Hoffman and her fellow researchers are urging “new integrated pest management strategies to treat Varroa destructor as a migratory pest, as well as for further research into the specifics of Varroa dispersal.” To read more, visit:

<http://mailchi.mp/americanbeejournal/abj-extra-april-26-2017-common-pesticide-damages-honey-bees-ability-to-fly-858189?e=e9ff21e0bb>

“Get to Know Tropilaelaps Mites, Another Serious Parasite”: Bee Culture’s “Catch the Buzz,” May 14, 2017



Above left, “Tropilaelaps clareae is among several species of mites in the genus Tropilaelaps” (Photo credit: Pest and Diseases Image Library, Bugwood.org); right, “Two gravid adult females and one protonymph (arrow) of T. mercedesae feeding on a prepupa of A. mellifera in Andong, South Korea. Multiple brown to black spots are feeding injuries inflicted by the mites” (Photo by K. Dongwon).

Move over, Varroa mites: Tropilaelaps mites may be coming to compete for host bees. Tropilaelaps are “a genus of mites found in Asia that parasitizes honey bees and could pose a threat to global European honey bee populations if it is introduced into new areas.”

Both Varroa and Tropilaelaps have infested honey bee colonies – both *Apis mellifera* and *Apis cerana* – in Asia for over 50 years, and both mites infest larvae, feed on hemolymph, and create vectors for viruses like the deformed wing virus. In fact, in Asian bees, Tropilaelaps pose greater danger than do the Varroa mites, according to Lilia de Guzman, Ph.D., research entomologist with the U.S. Department of Agriculture-Agricultural Research Service.

So far, Tropilaelaps mites have not reached North America or Europe – as far as we know. However, African beekeepers have found Tropilaelaps, “indicating that they can survive long distance travel.” Also, Tropilaelaps have settled “in South Korea, where winters can be harsh.”

Researchers admit that “there are enormous gaps in our knowledge regarding Tropilaelaps mites”: deGuzman and colleagues wrote the article to summarize all information known now about Tropilaelaps: “information on their life history and ecology in order to familiarize the community on what these mites look like, their current distribution, the signs of their presence (damages they inflict) on honey bee hosts, and how to manage them. We also offer research ideas that need immediate attention in order to be ready if these mites do arrive.”

To read *The Journal of Entomology* article “Ecology, Life History, and Management of Tropiclaelaps Mites,” visit: <https://academic.oup.com/jee/article-lookup/doi/10.1093/jee/tow304>. For Bee Culture’s article, visit: http://www.beeculture.com/catch-buzz-get-know-tropiclaelaps-mites-another-serious-parasite/?utm_source=Catch+The+Buzz&utm_campaign=b52d012783-Catch_The_Buzz_4_29_2015&utm_medium=email&utm_term=0_0272f190ab-b52d012783-256261065.

“Common Pesticide Damages Honey Bee’s Ability to Fly, Research Finds”: Bee Culture’s “Catch the Buzz,” May 4, 2017

A University of California-San Diego study has shown for the first time that the neonicotinoid thiamethoxam “harm[s] bee flight.” To see a video summary of this research, visit: <https://www.youtube.com/watch?v=QYTNyNoP3P4> (For full resolution, visit: <https://drive.google.com/file/d/0BzlpJXJvUCqfWmhJaFpaVWEtQTg/view>)

Earlier studies showed that when foragers ingested neonicotinoid pesticides along with nectar and pollen, they “were less likely to return to their home nest, leading to a decrease in foragers.” The new study “test[ed] the hypothesis that the pesticide impairs flight ability” using “a flight mill (a bee flight-testing instrument) from scratch. This allowed them to fly bees under consistent and controlled conditions.” After months of data gathering, researchers saw that normal, sublethal levels of exposure to thiamethoxam “resulted in substantial damage to the honey bee’s ability to fly . . . specifically impairing flight distance, duration and velocity.”

“Long-term exposure to the pesticide over one to two days reduced the ability of bees to fly. Short-term exposure briefly increased their activity levels. Bees flew farther, but based upon other studies, more erratically,” and that erratic flight pattern “may decrease their probability of returning home.”

To read more, visit: http://www.beeculture.com/catch-buzz-common-pesticide-damages-honey-bees-ability-fly-research-finds/?utm_source=Catch+The+Buzz&utm_campaign=ecd445c180-Catch_The_Buzz_4_29_2015&utm_medium=email&utm_term=0_0272f190ab-ecd445c180-256261065



A honeybee collects the pollen from an apple blossom (Blaine Friedlander, Cornell University)

“Bees face heavy pesticide peril from field edges, drift, long residue chemicals...from nearly everywhere”: Bee Culture’s “Catch the Buzz,” May 4, 2017

A new Cornell University analysis of bee bread from 120 honey bee colonies that were pollinating 30 apple orchards in New York State showed that 17% of colonies had “acutely high levels of pesticide exposure, while 73 percent were found to have chronic exposure, meaning that 90% were pesticide challenged.”

“Our data suggest pesticides are migrating through space and time,” according to lead research entomologist Scott McArt. The bees “may be gathering pollen from non-target wildflowers, field margins and weeds like dandelions where insecticides drift to and seem to linger.”

“Surprisingly, there is not much known about the magnitude of risk or mechanisms of pesticide exposure when honey bees are brought in to pollinate major agricultural crops,” he said.

“Beekeepers are very concerned about pesticides, but there’s very little field data. We’re trying to fill that gap in knowledge, so there’s less mystery and more fact regarding this controversial topic.”

Over 60” of the pesticides found “were attributed to orchards and surrounding farmland that were not sprayed during the apple bloom season . . . persistent insecticides aimed at other crops may be surrounding the orchards. In addition, pre-bloom sprays in orchards may accumulate in nearby flowering weeds.” Not only neonicotinoids, but a wide variety of pesticides were found in the bee bread sampled.

To read more, visit: http://www.beeeculture.com/catch-buzz-bees-face-heavy-pesticide-peril-field-edges-drift-long-residue-chemicalsfrom-nearly-everywhere/?utm_source=Catch+The+Buzz&utm_campaign=ecd445c180-Catch_The_Buzz_4_29_2015&utm_medium=email&utm_term=0_0272f190ab-ecd445c180-256261065



“There’s a good correlation between bee health and agriculture according to UT researchers”: Bee Culture’s Catch the Buzz, May 25, 2017

Though many assume – and studies like the above article suggest – that agricultural practices are bad for honey bee health, a new University of Tennessee study “says research shows a positive correlation between bee health and the presence of agriculture – just opposite to popular belief.”

Researchers evaluated how row-crop agriculture with traditional pesticide application affects overall colony health. “[C]olonies were monitored for performance and productivity by measuring colony weight, brood production and colony thermoregulation. . . hives . . . in areas with high to moderate agricultural vegetation grew faster and larger than those in low or non-agricultural areas. Researchers suggest the greater population sizes enabled better colony thermoregulation in these hives.” However, colonies “in a non-agricultural area struggled to find adequate food resources and produced fewer offspring.”

Though the researchers did find that pesticides caused some bee death, they said that their “study suggests that the benefits of better nutrition sources and nectar yields found in agricultural areas outweigh the risks of exposure to agricultural pesticides. . . . Researchers evaluated trapped pollen from each colony and found low concentrations of fungicides, herbicides and insecticides.

All were at levels well below the lethal dose for honey bees. Imidacloprid was the only neonicotinoid detected, also at sub-lethal levels.”

To read more, visit: http://www.beeculture.com/catch-buzz-theres-good-correlation-bee-health-agriculture-according-ut-researchers/?utm_source=Catch+The+Buzz&utm_campaign=37a3b37198-Catch_The_Buzz_4_29_2015&utm_medium=email&utm_term=0_0272f190ab-37a3b37198-256261065

“Walmart and True Value to phase out bee-killing pesticides while Ace Hardware lags behind”: Pollinator News, May 12, 2017

Friends of the Earth announced that Walmart and True Value “have decided to eliminate” neonicotinoids from their stores. Walmart says “that its growers have eliminated neonics from approximately 80 percent of its garden plants. Walmart has also eliminated neonicotinoids in almost all its off-the-shelf gardening products.”

True Value will “phase out products that contain neonicotinoid pesticides by the spring of 2018 . . . the company is working with its growing partners to remove neonicotinoids from its plants. To read more, visit: <http://pollinatorstewardship.org/wp-content/uploads/2017/05/May-12-2017-Walmart-and-True-Value-to-phase-out-bee-killing-pesticides.pdf>

“Neonic pesticides threaten wild bees’ spring breeding, study finds”: Bee Culture’s “Catch the Buzz,” May 24, 2017



Bombus terrestris foraging on oil seed rape. Credit: Dara Stanley

A new study from the University of Guelph finds that thiamethoxam exposure in spring, when wild queen bumblebees emerge from winter hives, “hinder[s their] reproductive success.” The queens in four bumblebee species studied produced “fewer fully developed eggs.” The researchers explained that in bumblebees, the queens “only lay eggs when the eggs are fully developed . . . If queens need to use energy to clear pesticides from their system instead of investing in eggs, then fewer fully developed eggs will result.”

The queens’ failure to produce enough eggs can doom the colony, because the “[w]orker bees from those first eggs are needed to clean and guard the nest, find food and tend to the next batch of eggs.”

The researchers caught “about 500 queen bees from four species . . . in early spring and for two weeks fed [the queens] syrup treated with pesticide doses similar to levels found in pollen and nectar in the wild. They were then observed for another two weeks before they were frozen,

dissected and examined. The researchers found that across all four species the queen bees that were given higher doses of thiamethoxam had smaller, less-developed eggs than the queens not exposed to the pesticide.” The researchers think this happened because “the metabolic costs associated with the detoxification required from pesticide exposure results in a reduced amount of nutrients available for other biological processes such as egg development.”

Also, in two of the species, the queens “ate less nectar after being exposed to thiamethoxam.” Eating less can cause the queens to go into a dormant state, since they lack energy to fly, gather pollen, and feed larvae. That this happened in two and not all four bumblebee species shows “that bee species vary in their level of sensitivity to pesticides, which is important information that should be factored into regulatory decisions on these chemicals.”

To read more, visit: http://www.beeeculture.com/catch-buzz-neonic-pesticides-threaten-wild-bees-spring-breeding-study-finds/?utm_source=Catch+The+Buzz&utm_campaign=24d04e593b-Catch+The+Buzz+4+29+2015&utm_medium=email&utm_term=0_0272f190ab-24d04e593b-256261065

“Nicotine-laced nectar can speed up a bumblebee's ability to learn flower colours, according to scientists at Queen Mary University of London (QMUL)”: *American Bee Journal*, May 17, 2017

Not only did bees learn colors of artificial flowers faster if even low concentrations of nicotine were involved (as opposed to a sugar solution), but when the reward was taken away, “[t]he bees maintained a predisposition for the flower even after the reward had been removed, resulting in 'addiction-like' behaviour from the bee.”

The study showed that although "Flowers typically reward pollinators 'honestly' with rewards such as sweet nectar, . . . nature's trick box is endlessly resourceful: some plant species gain an unfair advantage over competing species by spiking their nectar with addictive substances, such as nicotine in tobacco flowers.” Researchers think that “what we found with this study is just the tip of the iceberg. Plants may have hundreds of metabolites in their nectars and it is possible that many of them have to some degree similar psychoactive properties.”

Earlier studies showed that “bumblebees that have been infected by parasites seek out flowers with nicotine in the nectar, likely to fight off the infection. The nicotine appears to slow the progression of disease in infected bees but has harmful effects when consumed by healthy bees. A potential concern is that nicotine acts on the same parts of the nervous system as neonicotinoids - popular pesticides that might make some flowers addictively attractive to bees - even though these substances are toxic for insects.”

To read more, visit: <http://mailchi.mp/americanbeejournal/abj-extra-april-26-2017-common-pesticide-damages-honey-bees-ability-to-fly-858217?e=e9ff21e0bb>

“Why Honeybees Are Good at Grooming (It’s All in the Hair)”: *The New York Times*, May 16, 2017

A honey bee can collect up to 30% of her body weight in pollen on every foraging flight. However, pollen sticks all over their millions of body hairs; they then sweep pollen into the baskets on their hind legs (corbiculae) in flight for transport to the hive.



Bee covered in pollen (Wikipedia)

Georgia Tech entomologists learned that bees do this remarkably fast: “a bee could shed about 15,000 pollen grains in two minutes as it brushed itself clean.” Why don’t bees clean themselves with water? Lead researcher Hu notes that “When insects get into water,” he said, “they can’t get out because of surface tension.” Bees evolved “hairy legs to clean a hairy body and eyes.”

One technique the researchers used was “backlighting to silhouette bees and pollen grains so computer software could recognize and count the black dots against a light background. Dr. Hu said the technique was inspired by Pig-Pen, the Peanuts character who was always accompanied by a cloud of dirt particles.” The researchers also tested the “different spacing of the hairs on the leg and the eye,” which “turned out to be important, a bit like cleaning a hairbrush with a comb. You wouldn’t use a brush to clean another brush with exactly the same kind of bristles.”

To read more and see a bee grooming video, visit:

https://www.nytimes.com/2017/05/15/science/honeybees-grooming-video.html?emc=eta1&_r=0

“Authorities ID Russian Suspect in Great California Bee Heist”: NBC News, May 16, 2017



Image: Beeline Honey's Stolen Hives After They Were Recovered in Fresno County, California

Fresno County detectives arrested Pavel Tveretinov, 51, on April 28, in what’s being called “probably the biggest bee theft ever”: hundreds of bee colonies valued at almost \$1 million, snatched from Sutter County. Charges have not yet been filed because federal authorities are likely to take over the multi-state case.

Tveretinov made the mistake of bringing a Missouri beekeeper to a nursery in Fresno County where he had stowed his stolen bees. The Missouri beekeeper spotted markers that “looked like they belonged to his friends.” Also, the beekeeper “noticed that the equipment at the nursery didn't look right. ‘It looked like a chop shop for bee hives . . . different kinds are mixed with other kinds.’” The beekeeper got on the phone and called his friends – and the authorities.

Lloyd Cunniff, of Beeline Honey in Choteau, Montana [profiled in LCBA’s February 2017 Newsletter] “lost 488 hives, or enough bees to pollinate 244 acres of almond trees. He put his losses at more than \$400,000.” On May 7, he “got back two-thirds of his equipment, which had been spray-painted with somebody else's name. . . . the bees that survived were quarantined and being fed antibiotics and treated for mites.”

Asked if he ever plans to bring bees back to California, Cunniff said only, “‘If I'm short on money.’”

To read more, visit: <http://www.msn.com/en-us/news/crime/authorities-id-russian-suspect-in-great-california-bee-heist/ar-BBBbxxZ?li=BBnb7Kz#image=1> For an additional story covering Mr. Cunniff's bees and the Russian bee heist connections, check “Montana beekeeper’s stolen hives are recovered in ‘sting’ operation”: Bee Culture’s “Catch the Buzz,” May 23, 2017:

http://www.beeeculture.com/catch-buzz-montana-beekeepers-stolen-hives-recovered-sting-operation/?utm_source=Catch+The+Buzz&utm_campaign=574861a319-Catch_The_Buzz_4_29_2015&utm_medium=email&utm_term=0_0272f190ab-574861a319-256261065

ANNOUNCEMENTS

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

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

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)