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## March 2016 LCBA Newsletter

### *In This Edition:*

#### **Breaking Bee News in Chehalis & Olympia! (2)**

- Chehalis City Council drops bee restrictions after LCBA testimony
- SB 2478, improving honey bee forage, passes the Washington State Legislature

#### **Upcoming Events (3 -5)**

- **March 10 – LCBA Monthly Meeting:**
  - Bee Orders, 5:30 to 6:30 p.m.
  - **Speakers: Dan Maughan – Hiving Package Bees, Dos and Don'ts;**
    - Dan: Beekeeping with the “Long Langstroth” Hive
    - Rick Battin – Foundationless Beekeeping
    - Herb Zile – Oxalic Acid Fume Vaporizer v. Varroa
  - **April 14 – LCBA Monthly Meeting**  
**When Cities Outlaw Beekeeping: Speaker, Raine Lee Ritalto**
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- **Gottfried Fritz: 53 Years in Beekeeping (6 – 12)**
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#### **Pacific Northwest Beekeeper Survey Now Open: Please Participate! - Dewey Caron (14-15)**

#### **Bees in the News (15-19)**

- **The Best Way To Kill Varroa With Oxalic Acid: Sublimation**
- **Pennsylvania breeding project features bees who bite legs off Varroa mites**
- **USDA Study Links Commercial Queen Failures to Shipping Temperature Shifts**
- **Swarm of Bee Thefts in the Almond Fields in February**
- **Bees Fed Pollen-Heavy Diet Better at Fighting off Nosema**
- **Bees Love Broccoli Raab Pollen - & It's Great for Bee Health**

#### **Announcements (20): Used Hive Boxes For Sale, WSDA Hive Registration, & More...**

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

*Please contact LCBA Secretary Susanne Weil: [susanne.beekeeper@gmail.com](mailto:susanne.beekeeper@gmail.com) or call 360 880 8130.*

## **\*\*\*BREAKING NEWS\*\*\***

*Two great news flashes for beekeepers and bees within the past week!*

***Chehalis City Council repeals bee restriction ordinance after testimony from LCBA Board members:*** On February 22, the Council unanimously agreed to drop its prohibition of honey bee hives within 300 feet of any habitable structure. LCBA's President, Kevin Reichert, and member Phil Wilson, both spoke with Councilor Bob Spahr about the restriction, noting that one of LCBA's 2016 youth scholarship students would have to keep his bees in Napavine because of it, and that LCBA could not approach the Chehalis schools about the scholarship program with the ordinance on the books.

Kevin, Vice President Bob Harris, and Community Outreach Coordinator Dan Maughan attended the meeting. Kevin told the council about the many bee removals he has done in Chehalis, noting that whether the city wants them or not, it's got bees. Kevin suggested that the city keep its nuisance ordinance, though, to facilitate in removing any abandoned bee colonies. Bob told the council about LCBA's mentorship program, which can help new beekeepers avoid having their bees become a nuisance.

Though members of the council and the Chehalis Police Department had investigated, nobody could find out anything about the history of the bee ordinance – when it became law, or even why. Now, though, the ordinance itself is history. Many thanks to Kevin, Bob, Dan, Phil, and member Peggy Hammerhouse, who helped link our beekeepers with the council in her role as council staff. To read more, visit: [http://www.chronline.com/chehalis-city-council-lifts-honeybee-restrictions/article\\_aeb99cb4-da61-11e5-813f-832943755313.html](http://www.chronline.com/chehalis-city-council-lifts-honeybee-restrictions/article_aeb99cb4-da61-11e5-813f-832943755313.html) .



*Above, [rooftop bee colonies in Chicago](#). If Chicago can do it, so can Chehalis! (photo, Urban Ghosts).*

***Washington SB 2478 – directing the Noxious Weed Board to evaluate replacing noxious weeds with bee-friendly native forage - passed the state Senate by a unanimous 47-0 vote on March 1.*** LCBA member Brian Mittge saw the live feed on TVW and reports: “Lots of puns in the floor debate. Sen. Marko Liias said there was ‘quite a lot of buzz’ around this bill, and clarified that the state Weed Board had nothing to do with cannabis. Noting that another legislator from his district had promoted this bill, he said the measure is ‘as sweet as my seat-mate.’ In response, Sen. Pam Roach, at the dais, wondered aloud if she should say, ‘Thank you, honey.’ Lots of bee love in the Senate today.”

## UPCOMING EVENTS:

### March 10: LCBA Monthly Meeting

**Bee Orders: 5:30 to 6:30 pm in hallway outside Washington Hall 103. Please bee aware – this is the only opportunity to order bees through LCBA and get the club discount. One must be a member (paid dues in 2016) to order. For details, see the email sent to members on 28 Feb.**

**When: 6 – 9 p.m.:** Social Time 6 to 6:30; Speakers 6:30 to 7:30; Break & Brief Business Meeting, 7:30- 8:45.

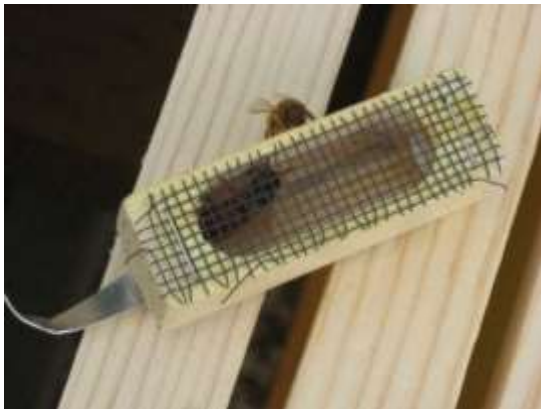
**Where:** 103 Washington Hall, Centralia College, 701 W. Walnut St., Centralia WA

**Speakers: Dan Maughan: *Hiving Package Bees, Dos & Don'ts*, + “Long Langstroth Hive”**

**Rick Battin: *Foundationless Beekeeping, a natural alternative***

**Herb Zile: *using the oxalic acid fume vaporizer for Varroa mite control***

**Also: Business meeting & Beekeeping Q&A. Questions? Contact Susanne.beekeeper@gmail.com or call 360 880 8130.**



*Package Bee Orders & hiving methods will be featured at LCBA's March 10 monthly meeting. Above right, Bob Harris at LCBA's first ever package bee workshop back in April 2009.*

### March 29: Beekeeping Orientation for 4<sup>th</sup>-to 8<sup>th</sup> Graders at Centralia College

Capitol Region Educational Services District 113 has invited LCBA to participate in a large watershed celebration and workshops for about 350 4-8th graders at Centralia College.

LCBA volunteers will offer 2 50-minute classes on honey bee behavior and beekeeping. CRESA says, “All of the students are from the Chehalis Basin Region and would love to learn about bees and their importance to the environment!” This will be a great opportunity for LCBA to get the word out about our 2017 Youth Scholarship Program. If you'd like to help, please contact [Susanne.beekeeper@gmail.com](mailto:Susanne.beekeeper@gmail.com).



*Above, honey bee foraging near capitol building in Toronto, Canada*

### **April 14: LCBA Monthly Meeting**

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

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

**Topic: When City Ordinances Forbid Beekeeping – What Can Beekeepers Do? Speaker: Raine Lee Ritalto.** . Here in Lewis County, Chehalis prohibited beekeeping within 300 feet of any structure, effectively outlawing beekeeping in the city limits – until LCBA members testified at a city council meeting on Feb 22. But no one knew why the Chehalis ordinance existed. Why do cities prohibit or restrict beekeeping? What can beekeepers do to help officials see value in urban beekeeping? Beekeeper Raine Lee Ritalto is the requestor of Oregon HB2653 Residential Beekeeping; she led the movement to get this bill through the Oregon House of Representatives. Raine will share her experiences. **Also:** Short business meeting & "beekeeping Q&A."



### **April 23: Seedpod Farm Spring Festival**

#### **Seedpod Farm Spring Festival**

**When:** 10 a.m. to 3 p.m.      **Where:** 2330 Howard Ave, Centralia WA 98531

**What:** LCBA will have a table at this family-friendly spring fair in the Seedpod Farm Orchard, hosted by LCBA members Julie & Adam Gullett. Meet farmers, artisans, crafters, & sample their wares; goods for sale. For more information, visit [www.seedpodfarm.com](http://www.seedpodfarm.com), call 360 807 4693360 807 4693, or email [info@seedpodfarm.com](mailto:info@seedpodfarm.com) . Above, last spring's fair at Seedpod Farm.



## April 29 – May 1: Spring Youth Fair

*More news soon – call for volunteers to staff LCBA's booth at our March 10 meeting.*



## May 12: LCBA Monthly Meeting ~ Mushrooms & Bee Health

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

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

**Topic: Fungi Perfecti's Bee Friendly Research Campaign:** *Mycological approaches to increase longevity, reduce mite and viral burden, and improve immunity of honey bees*

**Speaker: Blake Westman.** Quite a few LCBA members have asked for a speaker on the WSU/Fungi Perfecti mushroom/bee health research! Blake is a Production Manager at Fungi Perfecti & one of the people involved with WSU's research. He studied Biology and Agroecology from The Evergreen State College & is now pursuing a MS/ MBA in Food & Agribusiness Management, & will have much to share. **Also:** Short business meeting & "beekeeping Q&A."

## Notes from LCBA's February 11 Monthly Meeting

**Package Bee Order Details:** President Kevin Reichert began the meeting with a review of bee order news. Kevin announced that after reviewing bids, the board decided to go with Beeline Apiaries, who offered us the best price. The details were sent to LCBA's mailing list in advance of this newsletter: 3 pound packages will be \$106.82; 4 pound packages, \$124.08; extra queens, \$30.75; 5 frame nucs, \$155.38. All prices include tax, and all order options cover either Italians or Carniolans. The bees will be from central California. Pickup will be at Beeline Apiaries; date TBA. LCBA mentors will be at Beeline on pickup dates for both packages and nucs to offer guidance to newbees, including a detailed step by step handout for hiving package bees, and free mini-marshmallows (the board is buying a package of marshmallows so you don't have to!).

**Order process:** LCBA will take orders at our March 10 meeting, from 5:30 to 6:30 in the hallway outside Washington Hall 103. By March 10, most of us will know what our winter losses are. We are taking orders only at the meeting so that we can give Beeline the complete order information on the 11<sup>th</sup>. To participate in this group order, one must have paid 2016 LCBA dues. For payment, checks or cash only: checks are preferred and must be made out to Lewis County Beekeepers' Association, as our bank accepts no abbreviations. If paying cash, please bring exact change – making change would slow down the line a LOT. If, for example, one pays \$107 cash for a 3 pound package, the 18 cents becomes a donation to the club. For questions, please contact secretary Susanne ([Susanne.beekeeper@gmail.com](mailto:Susanne.beekeeper@gmail.com); 360 880 8130).

### Speaker – Gottfried Fritz – 43 Years of Working With Bees



*Above, left. LCBA mentor Gottfried Fritz in 7<sup>th</sup> grade; right, Gottfried sharing fresh honey with a young visitor to LBCA's booth at the 2015 Spring Youth Fair.*

Gottfried's talk was prefaced by the 10 minute film, "The Beekeeper," by Spenser Sarsen (to watch this on YouTube, visit: <https://www.youtube.com/watch?v=Orb7nE6WQZY> ).

Kevin introduced Gottfried, who has been working with bees for 43 years. Gottfried began by noting that he got into bees a bit differently from the way most folks do. His "bee life" has had two phases. He was always fascinated by bees, starting with hearing stories from his uncle, who had been a beekeeper in Yugoslavia: his uncle believed that you could settle swarms by clanging pots & pans! Peter Glover commented that that was a common belief in England in

the 1700s. As a 7<sup>th</sup> grader (see photo above), Gottfried would see bees flying as he walked to school and was curious why they flew sometimes, but not at other times. Gottfried was the 2nd youngest of a big family; after they moved to rural northern California, two times a year they went to Eureka, the big town, to go shopping.



*Left, Gottfried & his younger brother, 1967; right, Gottfried's older brother, Tony, working bees.*

***Bee Adventure Begins:*** When Gottfried was 15, everything changed: his brother married into a beekeeping family. Gottfried's noted that beekeepers are like fishermen, always looking for the next big strike, but they will never tell you where it is. One morning, his brother woke him up: two big trucks filled with bee boxes stood outside, and Gottfried was told, "We need help – you're going to South Dakota with us." With that, Gottfried was "impressed," like the way that men were dragged into the navy in the War of 1812, and they were off to a destination near the Missouri River. It was a good place for bees, with many wildflowers and farmers growing hay: Charles Mix County (see map, below). His destination was Lake Andes, the county seat. The nearby "big town" was Picktown, where Tom Brokaw grew up. Many Sioux lived there. It was a big town – with a population of 1800, the county seat, complete with a water tower that had the town name on it, typical of those days.



*Left, maps of Charles Mix County, South Dakota; right, the South Dakota bluffs provided great bee forage.*

***Little House on the Bee Prairie:*** Gottfried found the facilities . . . a tad rustic. His relatives had bought a one acre plot; the house on it had one small bedroom and no running

water. A cistern in the front yard served as facilities for Gottfried, brother Tony, and sister-in-law Marlene for two and a half months; shelter was a tent.

***Gottfried's Mentor, the "Great Singing Beekeeper":*** Tony's father-in-law, Ray Conley, became Gottfried's bee mentor. Ray had gotten his start in Redding, California, then moved to Mt. Shasta, and then Eureka: he had seen acres of clover there, so he moved his bees to the clover. Unfortunately, they had only one good year in Eureka because there was not much nectar. From there, Ray moved to central California, but pesticides drove him out. Gottfried called Ray "the Great Singing Beekeeper," and not just because he was in the King's Herald Gospel Quartet. When Gottfried first arrived in Charles Mix County, he heard Ray singing to the bees! Ray taught Gottfried three key things about bees, a "code of honor." First, unless it is terribly cold, never wear gloves – Ray never would, even when unloading bees and handling bees getting mean, and Gottfried doesn't glove up, to this day. Second, the smoker is the beekeeper's best tool: use smoke, use it right. Third, move slowly, and be deliberate – don't drop hives or frames, since that's what gets bees going.



*Above left, bee on yellow sweet clover. Middle, Ray & Alice Conley: Ray became Gottfried's mentor. Right, bee on alfalfa blossom.*

***Dakotas Bee Forage:*** When Gottfried and Tony arrived in South Dakota, they were about a month behind in the season, and their equipment kept breaking down. They tried to get the bees to the last of the nectar flow. Dandelions were a major forage crop, but number one was sweet clover (see photo above). Many bees are trucked from the California almonds to the Dakotas for this reason. Alfalfa blossoms, too, were abundant and great for bees.



*Above left, skyscrapers of supers; right, a wind-sheltered bee yard.*



**Big Stacks of Supers:** In the Dakotas: they used only deep supers made of redwood. Instead of 10 frames, they ran eight: they wanted easier uncapping, plus the price of wax was much higher than honey, and eight frames encourages the bees to build frames out. Their best location was near Grosse, Nebraska. Here, they had about 40 hives per yard – some hives were stacked to eight deeps high! (See photo, above.) They took over 300 pounds of honey from some hives. For windbreaks, trees were planted: they sheltered bees in the typical bee yard (see photo, above). In Nebraska, there was some friction between beekeepers: by law, they couldn't be closer than three miles from another beekeeper's location, and this was enforced.

**Their Honey House & Extraction Process:** Gottfried displayed a floor plan diagram that shows how they set up their honey house extracting area. Their extractors took 45 frames at a time! See the photo, below, of the uncapping machine with frames on what looked like a conveyer belt to carry frames to extractors. Theirs was different, but the photo conveys the idea.



*Above left, settling tank for honey; right, uncapper.*

The skylights in the honey house attracted bees, and then Gottfried would go up a ladder with a bucket of water and slosh the bees to get them down on the floor. They would get the wet bees, put them in front of the hives, and they'd got back in. This was how Gottfried got his own first hive (and burned his initials on the migratory cover; see photo below).



*Above, Gottfried's first bee colony.*

The biggest disaster you could have in a honey pump house would be to leave the machine on and have two gallons of honey spill - so dense. See photo of the honey pump, below. They had two 400-gallon settling tanks and put the honey into 50 gallon drums. Sometimes, Gottfried would sleep by the settling tanks, it was so cozy. He noted that as honey is more dense than water, a full 50 gallon drum of honey was incredibly heavy – yet he and his brother moved them with little hand trucks! Gottfried weighed about 155 pounds and his brother just a little more: he recalled that they were like sparrows on barnyard waste, trying to pull the hand truck down to the wheel drum.



*Above left, honey pump; right, honey storage tank.*

Gottfried’s mentor Ray used to say, “I have the best job in world – my wife never bothers me at work.” Alice was allergic to bees, but understood their value. She said, “Bees are wonderful – they never take a day off.” \$100 a day was a lot of money then.

On their way back to Eureka at the end of that first summer, they met “the lady in pink,” Dorothy Ryder, who took care of 400 hives and harvested 44,000 pounds of honey. She was a legend, back in the day (see below). Ray and Tony needed more help: they were losing too much honey, so Gottfried’s younger brother Helmut joined the enterprise: they drove back 1700 miles in a ’53 Ford to help. Later, Helmut practiced medicine in Chehalis until 1996.

***Beekeeping Then & Now:*** Gottfried wrapped up his talk with reflections about how beekeeping has changed over the years. First, mites were not a problem in the 1960s: foulbrood and wax moths were the key concerns. There were no local bee gear shops: instead, the local blacksmith often was asked to custom-make components for equipment. Gottfried noted that they were not as environmentally aware as today: for example, potassium cyanide was used to kill hives that had American Foulbrood, same as in gas chambers. Carbolic acid (phenol) was used to drive bees from supers. They used to put used motor oil on burlap to produce more smoke per material burned. (At this, Bob Harris was heard to say, “You’re my hero!”) Pesticides were not a major issue, either. Walk away splits were usually a success and regularly used to increase colony numbers. The wholesale price for honey was 25 to 35 cents per pound. Farmers were given 5 gallons of honey per year in exchange for letting bees on their land; rather than paying per colony, like today, it was more a barter system. At least 90 pounds of honey were

needed to over-winter a colony. Laws dictated how close your apiary could be to another beekeeper. All locations had to be submitted to the state bee inspector.



*Above left, Dorothy Ryder with hive for harvest; right, Gottfried & brother Helmut.*

***Adventures of Beekeeping:*** Gottfried reflected on how beekeeping enriches your life. You meet new people, see communities and learn their traits, and you quickly discover that bees are great conversation starters. He had unpredictable trips with bees, like 30-hour, non-stop drives taking bees to Texas - but what a great way to see the U.S.! You get stranded by hurricanes and enjoy the beauty and variety of our land. You experience the excitement of swarm capture, the disappointment of losing a colony, the satisfaction of saving a weak or diseased one.

***The Commercial Beekeeper v. The Hobbyist:*** Over the years, Gottfried has observed differences between commercial and hobbyist beekeepers. The commercial beekeeper, like a miner or fisherman looking for the next great location, may not be willing to share information, but will put up with hardships and think of bees as partners. The commercial guy will be more likely to use medications. Often, he will re-queen on a schedule. A major philosophical difference from the hobbyist: the commercial beekeeper's philosophy is that if you treat bees well, they will reward you.

In contrast, hobbyist beekeepers think of bees as our "wards" and get emotionally involved, calling them "the girls." They use sugar water, not smoke, and do supplemental feeding. Hobbyists tend to be more willing to share information, more environmentally aware, more sensitive about pesticides. Hobbyists who've done a lot of reading, especially, get overwhelmed with fear of stressing their bees when they work the colony.

***Beekeeping: A Great Passion:*** Gottfried himself is "not so into honey," but finds beekeeping itself so variable and complex: no one has all the answers. He's made great friends for great discussions, and enjoyed the challenge of learning constantly, the satisfaction of mentoring others and helping them appreciate the craft, the chance to observe a great natural cycle of living organisms, and to appreciate the complex, mysterious ways of the hive's society.

Gottfried concluded with the observation that as a spiritual person, he finds that beekeeping reflects his sense of the order of God's design.

***Comments:*** Phil Wilson asked Gottfried how he learned to work bees without a suit. Gottfried answered that his brother Tony challenged him. When bees are busy with nectar, they are very gentle. During the alfalfa bloom, Gottfried thought, "I bet could work without gloves";

he and Tony then challenged each other to go without veil and suit. They bet, “I can work bees without my smoker!” Finally, they were down to just underwear and rubber aprons. Gottfried suggests that this is better not tried at home! Everyone gave Gottfried a rousing round of applause and thanks for such an entertaining and insightful look at how beekeeping has changed.

## **February Monthly Business Meeting Notes**

**Treasurer’s Report:** Treasurer Rick Battin reported that LCBA has \$6000.96 in our general account and \$2278.83 in our Youth Scholarship account.

**LCBA Nametags:** Rick announced that with the new memberships coming in, he will “do the nametag run” to Alderson’s/Awards West soon. 25 nametags gets us the price break. Rick asked that those who have not yet picked up nametags from last year, please do. Rick also noted that for memberships now and bee orders / memberships next month, checks are preferred, though we do take cash. Spare change is sometimes cumbersome to come up with and slows things down.

**Annual Audit Committee:** Steve Howard and Gordon Bellevue served as LCBA’s audit committee for a second year to aid in continuity. Steve reported that they went through the checkbook: everything balanced and checked out. They have made some recommendations to facilitate more efficient record keeping, but “our money is there.” Rick has already made positive changes on the ledger. President Kevin Reichert thanked Steve, Gordon, and Rick for this important club service.

**Swarm and Colony Removal Subcommittee Report:** Kevin reported that a subcommittee of the board has reviewed LCBA’s swarm and colony removal policy and suggested some changes, which the board agreed should be sent to members on the swarm and colony list. Only one response was returned and it had no issues with the proposed changes. Kevin outlined the subcommittee’s recommendations:

- Swarm removals will continue to be free and those who remove swarms will continue to be listed on our website, township by township. Kevin noted the importance of this as bee education to the community, many of whom are terrified of bees. We can help them understand bees much better and educate about the differences between honey bees, wasps, hornets, and yellow jackets.
- Colony removals: the subcommittee noted that there are some significant safety and liability issues in removals. Some are easy, some difficult – for example, ground level removals v.s. 2nd & 3rd story or roof top removals. Falls or accidents could be career ending for a beekeeper. Also, time and expense can mount up with trips to look at a job site, round up equipment and possibly a team to do the removal, and then to relocate and hive the bees. Further, some who call on LCBA members for removals want it done ASAP because after years of knowing they had bees, they now have a contractor coming who won’t touch their job until the bees are gone.
  - Kevin noted that LCBA currently has no guidelines in place, and reported the board’s decision that liability should shift away from LCBA, except for teaching workshops.
  - Toward this end, the board has established new guidelines for colony removals:
  - Colony removal will not be listed as a free service on our web page, but will read, “Colony Removals: except for occasional workshops, LCBA no longer offers colony removal as a public service. Our website lists individuals who will do removals, and homeowners may contact them for information regarding the colony removal. Note: charges may apply.”
  - Individuals doing jobs will have the option to charge for services at their discretion.

- The subcommittee recommends that if one chooses to charge, the minimum should be \$25.00 per hour charge on most jobs, but this is up to the individual.
- Complex jobs, short notice jobs, difficulty and/or safety concerns, etc. may warrant a higher per hour charge if the individual doing the removal thinks this is appropriate.
- It is also recommended (not required) that said persons providing the removal, (i.e., doing the work) should have the owner of the property sign a "Hold Harmless Agreement," provided by LCBA, to omit yourself and LCBA of any and all liabilities. The board is working on this form to make available to members.
- Those doing removals should convey to the property owner that they do not "Re-construct" or put back together, but will provide limited clean-up of the site.\*
- Those doing removals should hold themselves and any team members to high professional standards that coincide with LCBA's goals and standards while performing the tasks.

Kevin commented that hopefully, these small changes and guidelines will help keep our swarm and colony removal teams on the same page to better serve our communities and also protect themselves.

***Chehalis Beekeeping Ordinance:*** Kevin reported that he and several board and association members, including Peggy Hammer, are having discussions with members of the Chehalis City Council to discuss the ordinance that makes Chehalis the only city in Lewis County that effectively outlaws beekeeping: Chehalis prohibits bees within 300 feet of habitable structures. (See note, page 2, about the outcome!)



*Left, Rick Battin answering questions during an apprentice class break; right, Peter Glover guides Youth Scholarship student Sam as he assembles frames in a jig at Bob Harris's Rose of Sharon Farm shop.*

***Youth Scholarship Program Update:*** Susanne introduced Josiah Cowin, one of our two 2016 Youth Scholars. Josiah is a home schooled high school junior who lives in the city limits of Chehalis, so he will keep his bees in Napavine at a friend's home. Gottfried Fritz has agreed to be his mentor. Our other Youth Scholar is a Chehalis 5<sup>th</sup> grader – his family has requested that his surname not be noted in LCBA publications, but his first name is Brian, and Susanne will be his mentor. Evening meetings on school nights are not really feasible for Brian, but he will be attending workshops. Both are taking LCBA's Apprentice class, and both are very excited about starting with bees!

***Apprentice Class & Hive Assembly Workshops:*** Speaking of the Apprentice class, Susanne reported that 55 students are enrolled this spring – our biggest class yet. Susanne has coordinated the class with guest lessons by Bob Harris, Dan Maughan, Kevin Reichert, and Rick Battin; Peter Glover has taken on the thankless job of grading those WSBA tests.

**Call for Mentors:** In the absence of Mentorship Coordinator Martin Stenzig, secretary Susanne Weil asked for volunteers to serve as mentors to new and nearly-new beekeepers this year. A sign up sheet was passed around. Susanne noted that you don't have to be a longtime beekeeper to help a newbie, and that it is very rewarding to work with new beekeepers and help them as issues arise.

**Call for Mason Bee Blocks – Donations for Gardening for Everyone on Feb 27:** Kimo Thilges is again offering mason bee blocks to the public at Gardening for Everyone this year. Kimo was not able to attend tonight's meeting, but he sent a message that Mason Bee blocks could be dropped off at his residence or dropped off at the college at GFE day. A number of members signed up to donate mason bee blocks.

**Spring Youth Fair, April 29 – May 1:** LCBA is planning to have a booth at the youth fair again this year; there will be more details and a volunteer sign up sheet passed around at our March 10 meeting.

**Beekeeping Q&A:** Many have checked their bees and so far it looks like thought there have been some losses, many colonies have made it through winter. Many have used the ventilation board approach that Kevin outlined in fall meetings. On warm days, we can be checking whether sawdust and burlap in ventilation boxes is soggy and needs to be changed out, as well as scraping out mildew from inner covers. Bees may need replacement hard candy and possible pollen patties. Some are already seeing bees bringing back pollen. Active bee season is coming!



## **PNW SURVEY OF BEE HEALTH & BEEKEEPING PRACTICES**

### **Survivorship Survey ~ by Dewey M. Caron**

Last year, 250 OR/WA backyarder beekeepers were surveyed during April seeking information on overwintering colony losses/survivorship, and management such as colony feeding, sanitation and Varroa control efforts. The results are posted on this website:

[www.pnwhoneybeesurvey.com/annual-surveys](http://www.pnwhoneybeesurvey.com/annual-surveys) . There is a report (see individual club reports) for Lewis County from my June 10, 2015 meeting talk.

Colony loss levels from all respondents were 27% for both 8-and 10-frame Langstroth hive beekeepers, double that number for 5-frame nucs and top bar hives while Warré hive losses were intermediate between the two groups. For Lewis Co, 50 of the 61 fall hives survived, with lower losses for 10 frame hives; not all hive types were included in the 7 Lewis Co survey returns I received (see individual club reports at above address.)

I would like to expand the data base for Lewis Co this year. I hope you might be willing to respond to the 2015-2016 survey [www.pnwhoneybeesurvey.com/](http://www.pnwhoneybeesurvey.com/) . The electronic survey will be open March 17th and it should take no more than 5-10 minutes to complete. There will be paper

copies available at the April meeting – I expect to be able to give you a results report at the August LCBA meeting.

Information requested will be very similar so I can compare last year with the current one. If you would like to review the inquiries in preparation for the survey please locate the “2016 PNWals” pdf download available on the websites blog page and by simple Google search.

While the main emphasis of the survey revolves around reporting how many colonies you had last fall compared to this spring, which we assess through hive location, hive types and originations (meaning were they overwintered colonies, nucs or packages purchased, swarms or splits), other survey questions sometimes open up more questions. Last year, for example, beekeepers doing several wintering preparations improved survival, but feeding or use of the sanitation alternatives we listed did not result in better survivorship, at least not directly. Those beekeepers using sugar shake or mite drop boards to monitor mite buildup had fewer overwintering losses, but other sampling methods did not. Non-chemical treatments did not, directly, improve survivorship, at least for our survey respondents; use of Apivar, essential oil or formic acid significantly improved survivorship

The BeeInformed survey is also conducted in April each year. I ask that you continue to participate in this national survey as well. Although funding is now in the last year of this effort, we are hoping to continue what is now a 9-year record of overwinter loss/survivorship. Our preliminary report from last year is posted on the pnwhoneybeesurvey site with comparisons of losses in Canada and Europe.

Finally THANK YOU FOR SHARING THIS PAST SEASON. Please consider completing a survey for the 2015-2016 season sometime between mid-March and during April.

## **BEES IN THE NEWS**

*Thanks to Fran Bach, Linda Gorremans, Tim Hiatt, Steve Norton, Mike Radford, Kaylene Tate, Phil Wilson, & the folks at Bee Culture, American Bee Journal, & WSBA for bee news stories. Please keep ‘em coming!*

### **“The Best Way To Kill Varroa With Oxalic Acid: Sublimation”:** *Bee Culture*, 22 Feb 2016

Oxalic acid and the fume vaporizers that deliver it into hives have been getting great buzz as Varroa mite control. The Laboratory of Apicultural Research and Social Insects, University of Sussex, UK, has just published a review of the three major delivery techniques for oxalic acid - trickling, spraying, and sublimation. (In the sublimation method, oxalic acid crystals are heated with an electrically powered applicator that is held beneath the frames; when heated, the crystals turn to gas.) In their data, sublimation was the unquestioned winner, delivering more Varroa death at a lower dose: “application of 2.25g oxalic acid via sublimation to broodless hives in winter killed 97% of the Varroa.” In this study, oxalic acid didn’t hurt bees, and colonies whose beekeepers had used it turned out to have more brood the following spring. In contrast, “spraying significantly reduced colony survival.”

To read more, visit: <http://www.beeeculture.com/sublimation/> To read the paper, “Towards integrated control of varroa: comparing application methods and doses of oxalic acid on the mortality of phoretic Varroa destructor mites and their honey bee hosts,” by Hasan Al Toufalia,

Luciano Scandian, and Francis Ratnieks, visit:

<http://www.tandfonline.com/doi/full/10.1080/00218839.2015.1106777>

**“This honeybee dismembers its enemies and leaves them for dead”:** Grist.org, 12 Jan 2016

Some beekeepers do not treat, holding the philosophy that treating merely breeds treatment-resistant mites; these beekeepers hope to see bees themselves evolve defense mechanisms. That may be happening in Pennsylvania, where one apiary is marketing bees bred for their trait of biting the legs off Varroa mites.

NPR visited beekeeper Jeff Berta, who breeds his resistant bees from “a rebel honeybee queen living in the hills of western Pennsylvania . . . The queen, nicknamed No. 18, is reportedly sick of waiting around for humans to come up with an effective defense against the colony-killing varroa destroyer and has decided to take matters into her own hands (er — legs?).”

To read more about Berta and his band of tough Pennsylvania knee-capping bees, visit:

<http://grist.org/science/this-honeybee-dismembers-its-enemies-and-leaves-them-for-dead/>



**This honey bee queen (blue dot) has valuable genes so a wing has been clipped to prevent her from flying away.**

*Photo by Garrett Dodds.*

**“USDA Research Identifies Factors Causing Premature Commercial Honey Bee Queen Failure”:** *ARS News Service, USDA, 10 Feb 2016*

Many beekeepers and entomologists have observed that queens fail more quickly in recent years than they used to do. A new USDA study published in PLOS One suggests that “temperature extremes during shipping and elevated pathogen levels may be contributing to honey bee queens failing faster.”

Lead scientist Dr. Jeff Pettis of the Bee Research Laboratory in Beltsville, Maryland reports that “Either stress individually or in combination could be part of the reason beekeepers have reported having to replace queens about every six months in recent years when queens have generally lasted one to two years.”

Pettis and his team asked whether extreme fluctuations of temperature during shipping might degrade or destroy the sperm stored in queens’ spermathecae. They simulated shipping conditions in their lab and exposed inseminated queens to “to 104° F (40° C) for 1-2 hours or to 41° F (5° C) for 1-4 hours.” These queens’ “sperm viability” plummeted from 90 to 20%.

Next, the team did “real-world testing” they shipped queens in cages equipped with thermometers set to “record[ ] the temperature every 10 minutes . . . from California, Georgia and Hawaii to the Beltsville lab by either U.S. Postal Service Priority Mail or United Parcel Service Next Day Delivery in July and September.” The result? 20% went through swings of temperature with extremes between 46.4° F and 105.8° F – “and for more than 2 hours at a time. Those exposed to extreme high or low temperatures during shipping had sperm viability reduced by 50 percent.”



Pettis sees a silver lining in these results, though: "with fairly simple improvements in packaging and shipping conditions, we could have a significant impact on improving queens and, in turn, improving colony survival."

Other factors may have affected sperm viability, though. Almost all queens in the study "had a high incidence of deformed wing virus; Nosema ceranae was the next most commonly found pathogen." Also, before shipping, beekeepers rated each queen's colony's performance, and "a clear link was found between colonies rated as better performing and queens with higher sperm viability. Poorer performing colonies strongly correlated to queens with lower sperm viability."

"Getting queens back to lasting two years may well be one of the links in getting our beekeeping industry back to a sustainable level," Pettis said. To read more, visit:

<https://mail.google.com/mail/u/0/?tab=wm#inbox/152ccd2b8a9dfb8b>

### **"Bee Thieves a Buzz Killjoy for Almond Growers": *CNBC*, 9 Feb 9 2016**

This year's almond season has rung in an unprecedented run of colony thefts. As the number of available bee colonies for pollination has dropped due to the wide range of stressors on bees, rental fees have taken off, and thieves have taken advantage. According to Butte County Sheriff's Detective Jay Freeman, at least six separate thefts have been reported so far in 2016 in Butte, Colusa, Glenn, Kern and Sutter counties. *CNBC* reports that some beekeepers fear that these thefts will cost them up to \$100,000.



*Above, [Almond Tree in Flower](#), by kincse\_j on Pixabay.com; license, public domain*

Though bee boxes, migratory covers, and transport pallets normally are marked and often numerical codes are branded onto frames, it isn't hard for a crook to cover up markings – or just move the bees to new boxes. One sad feature of the thefts is that almost certainly, the thieves are beekeepers who know how to move bees. Stolen hives "usually end up getting rented or sold to a broker, according to industry insiders. Sometimes they are disgruntled workers or beekeepers down on their luck with dead hives [who] take others to make up for their losses."

This year, 90% of commercially owned hives were expected to travel to California at the beginning of February to pollinate almonds on 800,000+ acres. Beekeepers now charge five times as much to rent a hive as they did in 2004: \$200 per hive is standard this year.

According to the Butte County Sheriff's Office "over 500 beehives have been reported stolen in two separate incidents which took place in two neighboring counties over the last two weeks."

One instance involved 280 hives on Jan. 30 in Colusa County, while the other was about 200 hives stolen in Butte County.” The office said that “another bee theft in the county, on Feb. 4, involved 64 beehives valued at about \$20,000. He said an arrest has been made outside the county for that case.”

On January 18, almost 300 hives were stolen for a \$98,000 loss. In Kern County, Jack Wickerd of the Happie Bee Co. reported losing "a couple hundred hives in Bakersfield" that were just over-wintering in a field. But Happie Bee got off relatively lucky: Wickerd noted that the night before his bees were abducted, over 400 were taken at another farm nearby.

According to the California State Beekeepers’ Association, "Brokers are looking the other way and don't want to know if those hives are stolen. There are newcomers to the industry because of the prices." CSBA is offering a reward of \$10,000 reward for information that could lead to “arrest and conviction of bee thieves.”

To read more, visit: <http://www.nbcnews.com/business/business-news/bee-thieves-buzz-killjoy-almond-growers-n514956> . For KRCC TV.com’s coverage of the man arrested on 17 Feb for “stealing 64 beehives from Olivarez Honey Bees Inc. in Chico,” visit: <http://m.krccrtv.com/arrest-made-in-butte-county-beehive-theft/38047278> . For coverage of the swarm of thefts by *Bee Culture* magazine, visit:

[http://www.beeculture.com/catch-the-buzz-authorities-warn-of-beehive-thefts-connected-to-almond-pollination/?utm\\_source=Catch+The+Buzz&utm\\_campaign=1bc98efa6b-Catch\\_The\\_Buzz\\_4\\_29\\_2015&utm\\_medium=email&utm\\_term=0\\_0272f190ab-1bc98efa6b-256261065](http://www.beeculture.com/catch-the-buzz-authorities-warn-of-beehive-thefts-connected-to-almond-pollination/?utm_source=Catch+The+Buzz&utm_campaign=1bc98efa6b-Catch_The_Buzz_4_29_2015&utm_medium=email&utm_term=0_0272f190ab-1bc98efa6b-256261065)

For *Bee Culture*’s feature on how honey bee health affects the almond pollination rush, visit: [http://www.beeculture.com/catch-the-buzz-news-from-gordy-wardell-on-almond-pollination-and-honey-bee-health/?utm\\_source=Catch+The+Buzz&utm\\_campaign=86e4830748-Catch\\_The\\_Buzz\\_4\\_29\\_2015&utm\\_medium=email&utm\\_term=0\\_0272f190ab-86e4830748-256261065](http://www.beeculture.com/catch-the-buzz-news-from-gordy-wardell-on-almond-pollination-and-honey-bee-health/?utm_source=Catch+The+Buzz&utm_campaign=86e4830748-Catch_The_Buzz_4_29_2015&utm_medium=email&utm_term=0_0272f190ab-86e4830748-256261065)

### **“Better-Fed Honey Bees Fight off Harmful Effects of Parasite”: *Bee Culture*, 22 Feb 2016**

Oregon State University entomologists have found that if bees have good nourishment, they can stave off *Nosema* better than those with limited access to pollen. According to Ramesh Sagili, professor of entomology and honey bee Extension specialist in OSU’s College of Agricultural Sciences, “We found that bees fed with a high-pollen diet had better survival, even though the same diet also enhanced the reproduction of the pathogen.”

The researchers fed different amounts of pollen from wildflowers to the bees and then put them in contact with *Nosema ceranae*, the microsporidian that infests the digestive system of honey bees. *Nosema* weakens bees’ immune response, makes it harder for them to metabolize protein, and results in malnutrition.

Sagili *et al.* found that although the bees who received the most pollen in their feed also had more *Nosema* spores in their tissues than the less well fed bees, the well-fed bees were also significantly more resistant to *Nosema*’s effects. Their hypopharyngeal glands, which make pollen into bee bread to feed larvae, had more pollen to synthesize. “It may seem counterintuitive

that the protein from the pollen enhanced the reproduction of the pathogen,” said Sagili. “But the important point is that the bees were able to compensate for its negative effects.”

One message of this study may be that letting bees accustomed to monocrop diets forage freely in areas that have not been cultivated, as well as feeding pollen supplements, could be more effective in preventing *Nosema* than treating with antibiotics, which promote resistance in the microsporidian. Monocrops are “a limited menu for [bees],” Sagili said. “It’s as if you or I were to eat nothing but chicken for two months. We think a polyfloral diet can definitely enhance bee nutrition by providing a variety of amino acids and other nutritional elements.”

Sagili warned that over-feeding protein can damage bees, saying that “there is an optimal balance of nutrients needed for best survival,” he said. “We now need to do some trials in the field to determine how much protein is optimal.”

To read more, visit: [http://www.bee-culture.com/catch-the-buzz-better-fed-honey-bees-fight-off-harmful-effects-of-parasite/?utm\\_source=Catch+The+Buzz&utm\\_campaign=9560acdbfe-Catch+The+Buzz+4+29+2015&utm\\_medium=email&utm\\_term=0\\_0272f190ab-9560acdbfe-256261065](http://www.bee-culture.com/catch-the-buzz-better-fed-honey-bees-fight-off-harmful-effects-of-parasite/?utm_source=Catch+The+Buzz&utm_campaign=9560acdbfe-Catch+The+Buzz+4+29+2015&utm_medium=email&utm_term=0_0272f190ab-9560acdbfe-256261065)



*Bee Foraging on Rapini by Gloria DeGrandi-Hoffman, USDA*

### **“Bees Abuzz Over Rapini”: *American Bee Journal*, 17 Feb 2016**

Broccoli raab – more formally named “rapini” – is “a turnip-like vegetable featured in the recipes of cable television’s top celebrity chefs.” It turns out the honey bees are little foodies who adore rapini pollen. An ARS study has found that managed bees who foraged on “fall-seeded rapini” were more successful than colonies fed on protein supplements.

The almond industry asked ARS-Tucson’s lab to run this study, seeking preliminary feed for bees before almond trees bloom. Rapini withstands cold well, attracts bees, and flowers only six weeks after it is planted, making it optimal forage for just-overwintered bees. In turn, better feed for the bees would mean better yield for almonds, according to Gloria DeGrandi-Hoffman, a lead researcher at ARS’ Carl Hayden Bee Research Center in Tucson.

Pollen patties, the study found, “didn’t meet all of the bees’ nutritional needs. The protein in the supplements also wasn’t well digested; about 65 percent was excreted as waste. With rapini pollen, only about 30 percent of the protein was lost,” DeGrandi-Hoffman reported.

To read more, visit: <http://agresearchmag.ars.usda.gov/2016/feb/rapini/>

## ANNOUNCEMENTS

**Used Hive Equipment Available:** LCBA member Judy Nichols has 4 complete used hive sets for sale. Each set has a screened bottom board, two deeps with frames, an inner and telescoping cover. Judy is in Winlock and you can call her at (360) 785 3512. FYI, Judy's bees swarmed and the rest of the bees gradually absconded; she has not seen evidence of disease. It is always a good idea to wash used equipment with a bleach solution, though.

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

***BeeInformed.org. Citizen Science Project Wants Volunteers To Help Bees:*** THE P. APIUM PROJECT is testing a new honey bee probiotic. Dr. Vanessa Corby-Harris from the USDA-ARS is recruiting helpers to examine how the probiotic, *Parasaccharibacter apium* (or *P. apium*) affects a bee colony's well-being. Early results suggest that "bees supplemented with this bacterium can survive better." To read more, visit the link:

<https://beeinformed.org/2016/01/12/join-the-p-apium-project-a-citizen-science-project-to-test-out-a-new-honey-bee-probiotic/>

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

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

**WSBA Newsletter:** Pick up your copy online at [www.wasba.org](http://www.wasba.org): click on "Newsletters."

*That's all for now ~ take care, & bee happy! ~~ Susanne Weil, LCBA Secretary*  
**[Susanne.beekeeper@gmail.com](mailto:Susanne.beekeeper@gmail.com); 360 880 8130)**