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December 2015 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: susanne.beekeeper@gmail.com or call 360 880 8130

UPCOMING EVENTS:



Above, Barbara & Steve Grega with candy board won at last year's holiday potluck.

Wednesday, December 9: LCBA's 7th Annual Holiday Potluck

Please mark your calendars & get ready to share good food, good fellowship, & after dinner, a brief monthly meeting with a vote on bylaws revision, & our fundraising drawing for our 2016 Youth Scholarship Program

When: 6 – 9 p.m.: Social Time 6 to 7; Dinner 7 to 8; Brief Business Meeting, including Elections & Youth Scholarship Program Drawing, 8 to 9.

Where: Newaukum Grange: 104 Browns Road East, Chehalis, WA: from I-5, Exit 77: after exiting, take Hwy 6 West & turn left onto Riverside Rd. Riverside turns into Shorey Rd. Stay on Shorey Road until stop sign at Hwy. 603: the Grange is across the street.

Please Bring: A dish of food to share & a plate, cutlery, & cup to eat/drink from. The Grange has tables & chairs, 3 ranges, a refrigerator, & plug-ins for hot pots. LCBA will provide coffee, tea, hot chocolate, & napkins.

Food Drive: If you'd like to bring canned food or dry goods for the Greater Chehalis Area Food Bank, please do – we'll have a donation box.

Drawing to support 2016 Youth Scholarships: \$1 per ticket to help sponsor next year's Youth Scholars in Beekeeping . **Featured items so far:** a homemade oxalic acid fume vaporizer from Herb Zile, a screened bottom board, deep box, super, inner cover, & telescoping cover hand-tooled by Martin Stenzig, a cedar deep made by Dan Maughan, & 2 deeps made by Mel Grigorich, gift certificates to Reichert's Meats & local restaurants, honey bee holiday lights, children's bee books, LCBA mugs, fun bee items & more – see feature on our Youth Scholarship program later in this newsletter. If you would like to donate an item to help us fund our 2016 Youth Scholars, please bring it along! We're hoping to fund 3 to 4 students in 2016.

Potluck Questions? Contact Susanne.beekeeper@gmail.com or call 360 880 8130.

January Monthly Meeting (Jan 13th or 14th, depending on the vote at Dec 9 meeting; updates will be sent to our mailing list & posted on our website!)

When: 6 – 8:45 p.m.: Social Time 6 to 6:30 p.m.

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

What: Do It Yourself Beekeeping Projects by LCBA Members:

We've got some pretty handy folks in this club, & several of them are going to demonstrate some projects that others might want to do before the weather warms up & we launch into active bee season again. To kick things off, we'll show the short film, "The Beekeeper" (10 min); Herb Zile will explain how he made his oxalic acid fume vaporizer; Steve Howard will show his hinged-top bar hive; Dan Maughan will display his new digital scale for weighing hives; & Rick Battin will present some tips on foundationless frame beekeeping.

Also: Short business meeting & beekeeping Q&A.



Above, Herb Zile with the oxalic acid fume vaporizer he made in his shop; Herb is donating one of these to our December 9 potluck drawing to support our 2016 Youth Scholarship program; below, Steve Howard's hinged top bar hive.



Saturday, January 16: How to Get Started in Beekeeping – Free Overview

When: 10:30 am—12:30 pm

Where: Centralia Timberland Library Meeting Room, 110 S. Silver St, Centralia WA 98531

We'll Cover: Benefits of Beekeeping; “Bee Biology 101”; Equipment & How To Set Up an Apiary; A Year in the Life of a Beekeeper; Getting & Managing Bees; Harvesting Honey; & More! If you have a friend interested in starting beekeeping, please encourage him or her to buzz on down for this free orientation, which also serves as a preview of LCBA’s Apprentice Beekeeping course. **Questions?** Call 360 880 8130; email susanne.beekeeper@gmail.com.



Above left, LCBA Education Coordinator Peter Glover inspecting a frame during his first year of beekeeping in 2009. That sure was a clean bee suit . . . right, setting up the apiary: using a level.

LCBA’s Next Beginning Beekeeping Course starts January 30!

When: Saturdays, January 30, February 6, 13, 27, & March 5, 9 a.m. to noon; Hive Assembling Workshop Feb 20 (space will be limited but there will be several alternate hive assembly dates).

Where: Centralia College Cafeteria, 212 S. Rock, Centralia WA 98531 (Hive Assembly Workshop is at a member's shop in Chehalis).

Course Content: Our class follows the Washington State Beekeepers' Association curriculum. Topics include: Honey Bee Life Cycle; Bee Behavior; Equipment & Apiary Set-up; Starting & Maintaining Bee Colonies; Seasonal Management; Bee Diseases, Pests, & Treatment Methods; How to Harvest Honey; Improving Your Garden Through Pollination.

Post-Course Support: Hands-on Workshops led by LCBA mentors help new beekeepers practice effective hive inspection techniques, careful observation, detection of mites & disease, treatment options, honey supering & removal, fall management, & preparing bees to over-winter.

Instructors: Our WSBA-certified instructors are longtime beekeepers & members of LCBA's board. For more details on the course, including registration information, visit our website & click on the “Upcoming Events” to download our course brochure. **Questions?** Email susanne.beekeeper@gmail.com or call 360 880 8130.

LCBA's Youth in Beekeeping Scholarship Program: 2015 Review & 2016 Plans



Above left, 2015 LCBA Youth Scholarship student Jana Girt holds up a frame of bees during her first hive inspection; right, Jana with her red ribbon honey at the Southwest Washington Fair.

LCBA's 2015 Youth In Beekeeping Scholar – Jana Girt: LCBA's Youth in Beekeeping Scholarship Program has had a 2nd successful beekeeper in Jana Girt, our 2015 recipient. Jana is a junior at Onalaska High School, involved in Future Farmers of America and many other activities, yet she made time to learn the craft of beekeeping this year.

Jana and her mother, Janelle, took LCBA's beginning beekeeping course this spring and completed their certificates with very high scores. With help from mentors Peter Glover, our Education Coordinator, and Susanne Weil, LCBA Secretary, Jana and Janelle assembled five medium supers and frames, and hived their bees in April.

Jana proved a quick study. She is calm working her bees, which contributed to the nice demeanor these bees displayed all season, even in the heat wave. She is also sharp-eyed, observing key details, like noticing when the top box became honey-bound in early July. Jana and Janelle opted for the bee escape board method to coax bees out of the super and minimize disruption to the girls. They harvested 5 frames of honey, leaving some extra frames to help the bees over-winter. Jana entered her honey at the Fair and won a red ribbon – in her very first season. Nice job, Jana!

Jana attended LCBA's spring and fall management workshops in Adna; Jana had a conflict for the honey spinning, so Janelle came to spin. Both mother and daughter helped out at our Spring Youth Fair and Southwest Washington Fair booths, sharing what they have learned so far about bees and beekeeping.

For over-wintering their bees, Jana and Janelle are using the "Reichert Method" – a moisture control box. When tested using the sticky board method, so far the Girt colony has no mites: fingers crossed for this to continue! To read more about Jana's first year in beekeeping, visit our website, where there is a photo gallery and month by month account of her progress:

http://lewiscountybeekeepers.org/youth_scholarship_program/2015_youth_in_beekeeping_scholarship_student

Jana wrote this message to the members of LCBA:

“My first year of beekeeping was an adventure. Learning how to work with honeybees was more fun than I could have imagined. It’s rewarding in many ways, and I’ve met many new and interesting people. One of my most memorable moments when learning to beekeep is when I had just finished hiving my bees. I was doing an inspection with my mentor and my mother, and we were focusing on finding the queen. I pulled out a frame and spotted her instantly! Small things like this are part of what makes keeping bees so rewarding and fun. It’s enjoyable to learn the different things that each beekeeper does to make his or her hive better. Beekeeping has been an adventure for me, and I’m excited to continue with year two. My mentor Susanne has been extremely helpful and patient with my learning. I’d also like to thank the LCBA for the Youth in Beekeeping Scholarship that donated bees and gear for me, and providing me with many learning opportunities. Without their help, my hive would not be a reality.” ----Jana Girt



Above left, Jana assembling her hive boxes in April – thanks to Beeline for giving LCBA a discount on hive parts and tools. Right, Jana and “Bandit” with Jana’s colony in late July – that’s a bee escape board between the full honey super (upper box) and a 4th box for bees to recruit down into; the lower 3 boxes were so full that we added a 4th box to prevent possible swarming.

2016 Youth Scholarship Program Plans: In 2016, LCBA is opening up the Youth Scholarship opportunity to middle school as well as high school students. The program will be based in the Adna and Winlock school districts, our first year branching out from one to two districts. Community Outreach Coordinator Dan Maughan and Education Coordinator Peter Glover have taught “beekeeping 101” lessons in many classes in these schools, reaching about 200 students – the biggest outreach we have done so far.

Funding the Youth Scholarship Program: As of this newsletter, our Youth Scholarship Fund has \$1,255.71. These funds came from fundraisers done at our potlucks and meetings over the past two years. Since we only had one applicant in 2015, we saved half our funding from 2015, which encouraged us to offer the program in two school districts next year. We are hoping to

fund at least 3 and possibly even 4 students in 2016, depending on how much we can raise at our December 9 potluck. We budget \$500 per student, which covers all gear and bees – usually, not all of that is needed, so some seed money remains in the account. Beeline Apiaries of Rochester has given LCBA discounts on gear for the program both years – many thanks to them, and to LCBA members and local businesses who have donated items for drawings at our potlucks!

December 9 Potluck Drawing – Featured Items: You can help us raise the funds we need to expand this program by purchasing drawing tickets (\$1 each) at our holiday potluck. So far, we have the following featured items: Mentorship Coordinator Martin Stenzig has made a screened bottom board, deep hive box, super, inner cover, and telescoping cover. Member Mel Grigorich has made two deep boxes; Dan Maughan has made a cedar deep box. Herb Zile is donating his homemade oxalic acid fume vaporizer. We have gift certificates from Reichert’s Meats, Reichert’s Distributing, Beeline Apiaries, and these local restaurants: Jeremy’s Farm to Table, the Tiki Tap House, and The Pearl Café. Precision Printing/Copy Depot has donated 2 LCBA logo mugs. Members so far have donated honey bee holiday lights, children’s bee books, bee mugs, fun bee items & more. Many thanks to all who have pitched in! If you would like to donate an item to help us fund our 2016 Youth Scholars, please bring it along to the potluck!

Notes from LCBA’s November 4 Monthly Meeting

Topics: Oxalic Acid Fume Vaporizers for Varroa Control; An Insider’s Look at the Package Bee Business

Speaker: Mike Radford, Northwest Bee Supply



Above left, Mike Radford; right, Mike’s photo simulating what a Varroa mite would look if it were resized to infest human beings like they do bees.

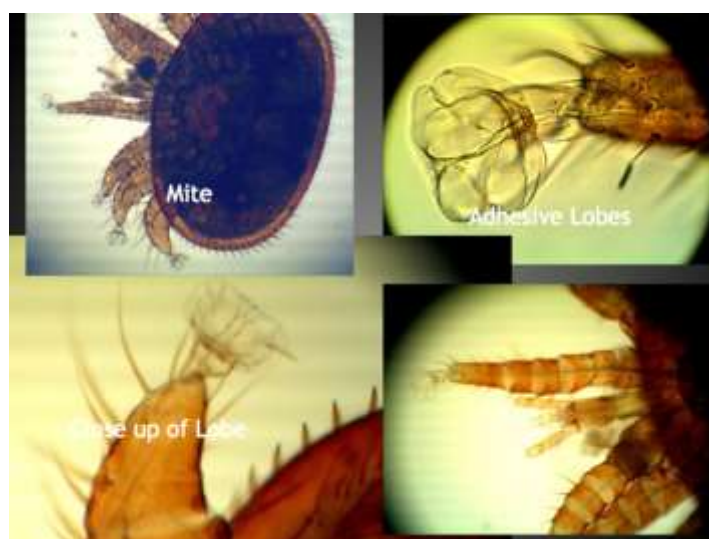
Mike Radford’s 2 PowerPoint slideshows are on LCBA’s website under “Monthly Meetings.”

Mike's Introduction to Beekeeping: LCBA President Norm Switzler introduced Mike Radford, the proprietor of Northwest Bee Supply in Sequim. Mike was a 747 captain for about 30 years; he's lived in Sequim for the past five years; before that, he spent 38 years in Alaska. Mike's introduction to bees was 30 years ago, when he saw a swarm covering a holly tree at his grandmother's house in West Virginia: he watched a local beekeeper capture it, and the seed was planted. Later, living in Alaska, Mike decided to give beekeeping a try. His mentor, Dr. Joe Carson, advised him to start with two packages: in Alaska, if you lose your hive, that's the end, given the short season. Mike said that he "proceeded to kill 'em the first year," but he was hooked. In fact, in Alaska, it's typical not to keep bees over winter – the conditions are just too harsh, and the bees starve. Mike started again in Sequim started again and encountered Varroa.

Can Varroa Be Wiped Out? Mike is a man with a mission: to rid his and others' colonies of Varroa mites. As far as Mike is concerned, Varroa is the worst thing that's happened to bees out of all the many challenges they face. Mike displayed a photo (above) showing what a Varroa mite would look like on a human. Many Varroa treatments exist– many are expensive, some are not. Randy Oliver has published 5 new articles on Varroa recently on his website, scientificbeekeeping.com, which Mike recommends: Oliver is "not beholden to anyone" on what he says and gives info to general public in a way most people can understand. Besides, Mike quipped, "This is the time of year that you get to read."

Oxalic Acid - A New Hope: Oxalic acid kills 95% of phoretic mites on contact within 24 hours (phoretic mites are "hitchhikers" on adult bees – not in brood). Mike sees oxalic acid as the most cost-effective mite control method. Oxalic acid has been used in Europe and elsewhere for over 20 years, but just became legal for use in U.S. beekeeping on March 10, 2015. It is extremely cheap to use, which Mike suspects may be why it has taken so long to become legal here. Oxalic acid is not a poison – it is found in nature, in the leaves of rhubarb and many other plants.

What Oxalic Acid Does: the acid works its way through the mites' feet and into their blood. Oxalic kills only the mite – not the bees. Used correctly, it does not harm the queen, the adult bees, nor the brood; it does not stay in the comb. However, mites resistance to Oxalic Acid has not been reported in the many countries where it has long been legal.



Above, left: Varroa mite; above right, closeup of adhesive lobes on the mite's feet; lower left, closeup of adhesive lobe; lower right, mites' legs (photos from Mike's slideshow)

As Mike's slideshow notes, "the acid builds up at the adhesive parts of the mite's leg: the paired lobes (pulvilli), where it forms a crystal (see photo, below). After three hours, the mite is dead. The crystal then breaks down, and only a small residual remains, forming akin to a drop."

Oxalic acid accumulates on the lobes at the end of the mites' feet and forms a crystal. Though the mites try to shake it off, they can't. The theory behind this is that "the adhesive lobes need to be moist in order for the mite to stick to the bee or other surface. The mites' feet are like suction cups: bees' are not, which is one reason why the oxalic acid vaporizing does not harm bees. The moisture comes through the leg of the mite, through the hemolymph of the mite (for more information, see <https://en.wikipedia.org/wiki/Hemolymph>). Through the lobes, there is direct access to the mite's hemolymph, and that is how the oxalic acid penetrates the mite and kills her. Bees are not harmed by vaporization because they have a different mechanism at their adhesive lobes."

To Dribble or To Vaporize? Mike prefers to vaporize the oxalic acid rather than to dribble it in using a sugary solution: dribbling CAN harm the bees because they eat that sugary solution, and then the oxalic acid can harm the walls of their guts.

The Vaporizer Mechanism: To make a vaporizer, you need a 12 volt battery, oxalic acid crystals, a mask for fumes, and a timer. The fumes are nasty for us, not for bees. You use 1 gram (2 teaspoons). See photo, below. (Northwest Bee Supply sells these vaporizers: visit:

<http://www.northwestbeesupply.com/>)



Above, components of the oxalic acid fume vaporizer (photo from Mike's slideshow).

When to Vaporize: Mike noted that just about every package has mites, so he recommends taking advantage of that “broodless window” to vaporize when you get a new package.

Treatment should be done 3 times, 5 to 7 days apart.

Mike notes that you can’t always see varroa on bees: some are transparent, and so many beekeepers think their bees don’t have mites because they don’t see mites when they inspect. To find out, you can use a sticky board, alcohol wash, or powdered sugar shake (for details on how to use these methods, visit LCBA’s website:

http://www.lewiscountybeekeepers.org/mentorsworkshopsclasses/managing_diseases_parasites

) In the U.S., 2% infestation is cause for concern. In August, Mike had 5.6% infestation on his Russian bees known for their grooming trait. Mike thinks that the time of year what that 2% is key to consider is spring, since the numbers can skyrocket over the season.

Monitoring mites after using the vaporizer: Mike tested the 20 hour mite drop with a sticky board after he treated with oxalic; then he cleaned the board and put it back in – 48 hours later, mites still were dropping. After that, it tapered off. Mike urges us to learn the mite life cycle, not just the bee life cycle. 7 days later, Mike vaporizes again, to get the next mite brood cycle hatch-outs; he does it again, 7 days later, to get the next. He suggests doing a before and after sampling of infestation and encourages treating in summer, if needed. When he first used the oxalic acid fume vaporizer, Mike’s bees were “the best they have ever been in my time keeping bees.” He did well with honey, too.

Left, mite drop 20 hours after treatment with oxalic acid fume vaporizer; right, 2nd drop after cleaning the board (photos from Mike’s slideshow)



Comparative Treatment Cost: Mike’s Slideshow Chart:

MAQS 49.95 equals 4.99 per treatment per hive

HopGuard II 44.00 equals 4.40 ea. 2 per hive 8.80 per hive

Apivar 33.99 equals 3.99 = 7.00

Miteathol 45.50 equals 4.55 = 9.10

Apiguard 33.50 equals 3.50 = 7.00

Apistan 29.35 equals 2.35 = 4.70

Apilife 29.95 equals 2.99 = 5.98

Oxalic Acid Vapor is .04 per treatment X 3 = 12 cents.

Q&A: Mike was asked how long oxalic acid is active in hive: Mike answered that it is about 3 to 5 days and tapers down. Also, see his website for the treatment timeline. On his Facebook page, he also has videos. Mike noted that “Fat Bee Man” on YouTube shows how to do an oxalic acid treatment, with information on not only the process, step by step, but also the time frame for doing one treatment.

Fat Bee Man Oxalic Acid Fume Vaporizer Treatment Videos:

<https://www.youtube.com/watch?v=sQp9pdAOjdo>

<https://www.youtube.com/watch?v=S2sl-Q0fpxY>

Why the battery? Mike noted that the battery is necessary because the acid must be heated to vaporize, which it does about about 230 degrees. Over 270 degrees, though, the oxalic acid will start to become formic acid – formic is a harsh treatment which can be toxic to bees, so be careful. You know the oxalic acid is working, Mike said, because you see it fuming out of every crack and crevice. Another member asked if oxalic acid is used as a wood treatment? Mike answered yes: it is used as a wood bleach.

Should you treat when you have a swarm? Mike says yes: no brood is the perfect time to knock down phoretic mites. Feral bees also have the mites and can infest your bee yard, so don’t assume that just because you got a swarm, they are “clean” of mites. Also, Mike notes, you apply oxalic acid at times when you don’t want to open up the hive: just insert the vaporizer into the opening of hive and do it.

Does Oxalic make the bees fan? Dan Maughan asked if bees really fan when you treat with oxalic: Mike says yes, they do, and FatBeeMan shows it in his video. Mike uses oxalic in spring now instead of Amitraz strips. “I got it when it was legal and I didn’t even know it,” Mike said.

Why was oxalic illegal? Mel Grigorich asked why the U.S. made it illegal: Mike noted that when he spoke at Puget Sound Beekeepers, someone said it was because there was no money in it: no new formula to patent or profit from. Oxalic acid is in every Ace Hardware in the U.S.: you could use to bleach your top bars.



Above left, weighing the funnel before funneling bees; right, shaker boxes (see discussion below).

The Package Bee Business: An Insider’s View

We took a break, and then Mike gave part two of his talk: an insider’s view of the package bee business. Mike took over a retiring beekeepers’ bee business, bringing 5 pound packages for Alaska’s short season. After about 3 years, Mike started selling bees down here, working out of

Sequim. In his first year on the Peninsula, he sold about 60 packages; now, he's up to about 2000. He does all he can to give customers a starter kit of bees: it's up to client to do the rest.

Packaging the bees: See photos above: Mike pours bees into boxes through a funnel. The bees go into a "shaker box, which is attached to the transport boxes: bees slide down the smooth walls into the transport boxes. The sides of the box are kept smooth - no comb, no foundation - so that all he has to do is gently tap it and the bees will fall into the transport box. He doesn't want to hit them too hard and hurt the bees. It is a fine-tuned process: he has to train guys how to shake the bees and not hurt them. The shaker boxes will hold 50 pounds of bees: they have ventilation windows and can be put on trucks. There is room for a feed tray in the shaker box. The bees get shaken at about noon, which is when they start moving up into the shaker box.

5 Pound Packages: Mike thinks that in our short season, 4 or 5 pound packages give a jump start. Attrition on a 3 pound can be serious; population can drop from 15,000 to 10,000 in the first month. The queen will lay, but only brood that the bees can keep warm will survive, so numbers matter. For feed cans, Mike uses a hole in the top, with a lid. The bees transfer food, one to the next bee, so they don't have to all climb up into the feeder area during the 6 hour drive from McMinneville, where his packages come from, to Sequim.



Above left: 5 pound packages ready for transport; right, preparing feed cans for the journey.

Mike's Naturally Bred Queens: Norm asked whether Mike's queens are naturally bred or inseminated: Mike said naturally bred. He gets about a thousand queens a week. Queen-rearing in the Pacific Northwest is temperature-limited: June is the start of queen-rearing season. Queens in cages are installed in packages; nurse bees from the queen supplier accompany the queens.



Above, transporting queens (all photos from Mike's slideshow).

Adventures loading bees on planes: For small loads, Mike can fly bees in his own plane: for transport of significant volumes to Alaska, though, Mike uses Alaska Airlines. Not all baggage handlers are happy with this: Mike told a story of a big baggage crewman who didn't want to load because he saw a hitchhiker bee – at which point a woman cargo loader took over. Mike meets the bees in Anchorage to get them, and away they go. The bees have a tendency to get warm in the boxes: this is why he moves them at night. He doesn't want them trying to fly to get away from each other, then falling on each other and throwing up in big gooey mess so that they drown. He gets them into Anchorage at about 2 a.m. They cluster up tight to keep warm. The queen hangs in her cage inside the 5 pound packages, just like in smaller packages.

Picking up bees: When you pick up bees, Mike notes, **don't** put them in the trunk: they will overheat and die!! Put them in the car: if you are comfortable, they will be comfortable. Also, Mike suggests not bringing your dog with you to bee pickup day, especially a black lab: bees think it's a bear. He had a hive of Russians that the neighbor dog tipped over: the bees gave chase, and he hasn't seen that dog since.



Above left, bees being loaded onto an Alaska Airlines plane; right, progressive farmers have no problem with Mike's placing bee boxes centrally in the field: they'll work their way out as the bloom progresses.

Adventures in pollination: Mike also does commercial pollinating. Blueberry bushes require pollination, and he does this in Oregon. Mike displayed photos showing how he ties the bee boxes down for transport: very careful tying! He can't ratchet down hard or could crush the bees. His bee truck has a special bed for this. Moving the bees safely is a slow operation using the fork lift and truck: nothing is done fast. They load them night before and move in morning.

Placing bees for pollination: Mike noted that the farmers he works with are progressive: they figured out that bees can fly, so they don't demand that Mike put bees on each acre. Timing is important for pollinating: he puts the bees on when the bushes are in about 10% bloom: the bees will then work their way out, further and further.

Swedish hives & Honey Rooms: Mike had a few more interesting things to share. He is very interested in how the Swedes keep bees. They use interesting box designs with drop-in frames a little over one foot deep; then they just keep adding, like a top bar, except adding frames. Mike also showed the Swedish Honey Room – complete with a tile floor and central floor drain! "This is what I aspire to," Mike said wistfully.



Above left, Swedish hive box design; right, the El-Dorado of honey houses, the Swedish honey room.

Q&A: Mike was asked how long hives are kept in the blueberries: 6 weeks, Mike said. They stay longer on blueberries than anything else and increase the yield by 40%, though they don't get much nectar. It's a monocrop situation, and not much else is available at that time, firstweek in April to mid-May. Mike said that the lion's share of his bee business is pollination; his friend does sell honey, though. Gottfried Fritz asked whether Mike had raised the queens in his slideshow: Mike said no, they come from near Chico, California. Joevanie Montalvo asked about the syrup feeders in the packages: what were the stands for? Mike answered that these are to prevent the bees from drowning. Also, with pressurizing, the vacuum seal in cans will pop: it is to stop suction from breaking, but bees can still get syrup. Mike uses corn syrup, not cane sugar.

We all thanked Mike for his varied and fascinating presentation!

November 4 Business Meeting:

Treasurer's Report: Rick Battin reported that our general fund has \$3,008.96, and our Youth Scholarship Fund has \$1,255.71. Rick also noted that we have LCBA shirts, hats, and patches; bringing all those boxes to the meetings is a lot to carry, though, so Rick asks that anyone who wants an item, please email him (rick.battin@gmail.com) with requests, and he'll bring them to the meeting.

Upcoming Events: December 9 is our 7th annual holiday potluck at the Newaukum Grange

Community Outreach: Dan reported that the October 17 Seedpod Farm Harvest Festival in Centralia, organized by LCBA members Julie and Adam Gullet, included a table staffed by Dan, Gordon Bellevue, and Pamela Daudet. Though light rain kept some away, they had a good time talking bees with visitors.

Possibility of getting a beekeeper onto the Noxious Weed Board: Susanne put out another call for signatures for member Nancy Toenyan's application for the vacant Onalaska-Salkum-Mossyrock position on the Weed Board. Nancy had a work conflict with tonight's meeting, so Susanne made the application available.

2016 Board Elections – Nominating Committee Report: Susanne reported for the Nominating Committee that so far we have received exactly zero nominations for open positions. The slate (see board elections feature, next newsletter section) will be *de facto* elected if no new nominations are made by November 15. There will be a vote at the potluck business meeting on

the question of moving the monthly meeting date; there will also be several minor bylaws revisions to fix some inconsistencies found by member Phil Wilson. The board will hammer out bylaws revision language at its Nov 18 meeting; the proposed bylaws revisions will be sent to members (current on dues) by the end of this month.

Youth Scholarship Program Report: Peter Glover & Dan Maughan reported on plans to visit classes in the Adna and Winlock Middle Schools to give orientations to the scholarship program and provide application forms. They are bringing Dan's photo-observation hive for show & tell. The application deadline is January 11, and the beginning beekeeping class which winners are required to attend (the scholarship covers costs) begins on January 30.

Several members wondered why the program is limited to specific school districts; others asked why we are not working with the 4H program. Board members summarized the origins and initial goals of the Youth Scholarship Program. From its founding, LCBA wanted to establish a youth program, with the goal of bringing families new to beekeeping into the craft. We had hoped to work with 4H, but their volunteers, like ours, are stretched thin, so this didn't work out.

Our program started in 2014, when we had a member teaching biology and animal husbandry in the Toledo school district who was willing to embed the actual WSBA beginning beekeeping curriculum in a class. The board decided to start the program small and try to do a good job, rather than going big and not having enough volunteers to support the students. The first year the program was a pilot; only 2 students applied and both were accepted. One student got very involved with beekeeping and attended many LCBA workshops; we saw less of the other, who was active in many school programs, sports, etc. and whose father attended workshops on his behalf. Parental involvement is great to have; our main goal, though, is to work with the students.

We tried the Onalaska School District for 2015 and got just one applicant, who fortunately submitted a great application and was willing to make the time to take the spring beginning beekeeping class and attend workshops. At this point, the board reconsidered the age range: high school students tend to be very involved in a lot of events, so we decided to expand the range to include middle schools, hoping to bring in some younger students with more time to learn beekeeping.

Given the small number of applications, the question was raised why we have not made the application process county-wide and advertised it at the Fair. Board members answered that because much is involved in keeping bees effectively and safely – much more than just putting bees in a box and walking away – it is important to give an orientation to the prospective applicants so they know what they are getting into. One reason why students who are interested at first opt not to apply is that they find out that keeping bees will require hours of their time, as well as attending the class and workshops held on weekends.

Volunteer time also is an issue: finding contacts in the schools and working out class visits, while important to do, is time consuming; vetting a large number of applications would be time consuming as well. Each youth scholar gets a mentor who puts in substantial time working with the student; club mentors are in short supply. Board members acknowledged that this cautious approach may be overly conservative, so members were asked to volunteer to help with planning for the 2017 program. Anyone who would like to be involved is warmly invited to contact our Education Coordinator, Peter Glover (peterglover@stanfordalumni.org) or Secretary Susanne Weil.

2016 Board Elections Update & Possible Change of Monthly Meeting Day to 2nd Thursdays in 2016:

Update on 2016 board elections: Per our bylaws, board elections were concluded on November 15, since no further nominations were made after the original mailing of our ballot slate in October. To review, the positions of President, Treasurer, Mentorship Coordinator, and Community Outreach Coordinator were up for election: Kevin Reichert's running for the presidency left a vacancy in the vice president's office. The 2016 officers are: Kevin Reichert, President; Bob Harris, Vice President; Rick Battin, Treasurer; Martin Stenzig, Mentorship Coordinator; Dan Maughan, Community Outreach Coordinator. Peter Glover and Susanne Weil are continuing as, respectively, Education Coordinator and Secretary. Our president since 2011, Norm Switzler, now becomes our Past-President.

What's left to vote on: The board is bringing several bylaws revisions for the membership's consideration & vote at the December 9 meeting. A ballot has already been sent to members current on dues; paper ballots will be provided at the meeting. In brief, the proposed bylaws revisions are as follows:

First, we are asking members to consider a bylaws revision that would make the monthly meeting date subject to majority vote of the membership, changing the specific bylaws language that constrains us to 2nd Wednesdays. Centralia College's growth in evening programs may require us to change dates or even venue, so this bylaws revision would help us deal more effectively with any upcoming changes.

Second, we are asking members to vote on whether LCBA will meet on the 2nd Wednesdays or the 2nd Thursdays of the month: Wednesday night conflicts for some members have brought this up.

Third, one of our sharp-eyed members noted inconsistencies in the bylaws re: who appoints what committees – in some articles, it's the president; in others, the board. The third ballot item would fix this to designate that all committees are appointed by the president with majority vote of the board. Thanks to Phil Wilson for spotting the discrepancies.

Finally, the 4th ballot item is a bylaws change in the treasurer's job description to reflect that the treasurer will file the annual IRS Form 990 (not 1099), per our 501(c)3 status. We really hope you'll approve this, since we're required by law to do it!

Questions? Please call Susanne at 360 880 8130 or email Susanne.beekeeper@gmail.com.

The Twelve Days of a Beekeeping Christmas



Illustration from "Pollinator News"

“The 12 Days of a Beekeeping Christmas”

By Julie Maurer, winner of the Bee Culture 2014 contest

Below are the lyrics for the 12th day – you can reconstruct the rest from there! Enjoy....

On the Twelfth Day of Christmas, my Honey gave to me: Twelve drones a-buzzin’

**Eleven acres blooming
Ten swarms-a-swirling
Nine hive tools scraping
Eight mites-a-dying
Seven smokers puffing
Six feeders dripping
Five Breeder Queens
Four honey bears
Three sting-proof veils
Two goat skin gloves
And a nuc for my apiary.**

Honey Feast for the Holidays ~ from the National Honey Board

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Prosciutto Wrapped Pork Tenderloin with Honey Poached Pears & Gorgonzola

Ingredients:

1 firm pear
½ cup water
¼ cup dry white wine
4 tablespoons honey, divided
1.5 pound pork tenderloin
6 ounces crumbled gorgonzola
¼ cup chopped walnuts
¼ cup Italian seasoned bread crumbs
3 ounces prosciutto

Directions:

- Heat oven to 350°F.
 - Peel the pear and slice it into six wedges. Remove the core.
- In a medium saucepan, bring the water, wine, and 3 tablespoons of honey to a boil. Reduce to a simmer and add the pears. Cover and cook 15 minutes, or until the pears are soft.
- Use a slotted spoon to transfer the pears to a cutting board. Let cool, then cut into a medium dice.
- Butterfly the pork tenderloin by slicing it lengthwise ¾ of the way through, then opening it like a book.
- Cover with plastic wrap and use a mallet to flatten the meat to ½-inch thickness.
- Remove the plastic wrap and cover the pork with an even layer of diced poached pears. Repeat with the gorgonzola, walnuts, and breadcrumbs.
- Roll the pork tenderloin into a cylinder, sealing the filling inside. Brush with the remaining tablespoon of honey and season with black pepper.
- Wrap the tenderloin with the prosciutto, slightly overlapping the slices crosswise.
- Use kitchen twine to tie the tenderloin together in 4 or 5 places to help it keep its shape. Transfer to a baking sheet.
- Roast pork until a meat thermometer registers 140°F, about 40 minutes. Remove from oven and transfer to a cutting board; let rest 10-15 minutes.
 - To serve, cut pork tenderloin into ½-inch slices.

Honey-Glazed Sweet Potatoes

Ingredients

2 lbs. - sweet potatoes or yams
2/3 cup - orange juice
1/3 cup - honey
1 Tablespoon - cornstarch
1/2 teaspoon - ground ginger
1/2 teaspoon - ground nutmeg
1/4 teaspoon - salt
1 Tablespoon - butter or margarine

Directions

- Wash and pierce potatoes or yams, then place on a piece of heavy-duty foil and bake at 375°F for 40 to 50 minutes until just tender.
 - Cool, peel and cut into 1-1/2 inch pieces. S
- Pray 8x8-inch baking dish with nonstick cooking spray. Place cooked potatoes or yams in dish; set aside.
- In small pan, combine orange juice, honey, cornstarch, ginger, nutmeg and salt. Stir until smooth. Cook over medium-high heat stirring until thick and mixture begins to boil. Stir and cook for one minute.
- Remove from heat and stir in butter. Pour over potatoes or yams stirring to coat.
 - Bake at 350°F for 25 to 30 minutes until hot and potatoes are tender.

Chunky Apple Cranberry Sauce

Ingredients

2 cups - fresh cranberries
2 - tart apples, peeled, if desired, cut in 1/4" slices
1 cup - chopped onion
1/3 cup - olive oil
1/3 cup - honey
4 teaspoons - red wine vinegar
1/4 teaspoon - ground ginger
1/4 teaspoon - ground cinnamon
Freshly ground black pepper

Directions

- In a medium saucepan, stir all ingredients. Heat to a boil.
- Lower heat, cover and simmer 15 minutes; stirring occasionally.
 - Cool and refrigerate.

Honey Cornbread Stuffing

Ingredients

4 cups - day-old Honey Cornbread
1 (4 oz.) - Italian sausage
1 cup - chopped green bell pepper
1/2 cup - minced onion
1/2 cup - chopped celery
1 Tablespoon - minced parsley
1 teaspoon - dried thyme leaves, crushed
1 teaspoon - salt
1/4 teaspoon - ground black pepper
1/3 cup - chicken broth
2 Tablespoons - honey

Directions

- In large bowl, place crumbled cornbread.
- Remove sausage from casing. In medium skillet, crumble and sauté sausage until brown. Using slotted spoon, remove sausage from skillet and add to cornbread.
- Drain all but 1 Tablespoon of fat. Return skillet to medium-high heat; stir in bell pepper, onion and celery. Sauté until vegetables are soft, about 5 minutes.
- Stir in parsley, thyme, salt and pepper. Cool slightly, then add to cornbread.
 - In small bowl, combine broth and honey. Pour over stuffing.
- Place stuffing in a greased 9x9-inch baking dish. Cover dish with foil and bake at 350°F for 20 minutes. Remove foil and bake another 10 minutes until stuffing is lightly browned.
- As an alternative, pack you may pack stuffing into poultry cavity before roasting.

Holiday Honey Caramels

Ingredients

1 cup - butter (no substitutions)
2 cups - honey
2 cups - whipping cream
1 cup - brown sugar
1 teaspoon - vanilla extract
finely chopped almonds, optional

Directions

Line bottom and sides of 9-inch square pan with plastic wrap; set aside.

Melt butter in medium-sized heavy saucepan over medium-high heat. Add honey, cream and brown sugar; mix well. Cook over medium-high heat until mixture comes to boil, stirring frequently. Reduce heat to medium and continue boiling, stirring frequently, until candy thermometer registers 250°F to 255°F, about 45 minutes.

Remove from heat and stir in vanilla; pour into prepared pan. Let cool completely in refrigerator before cutting into individual caramels with very sharp knife.

Roll in chopped nuts or coconut, if desired. Wrap each individually in clear plastic wrap. Store, tightly wrapped in refrigerator up to 1 month. Caramels will be soft at room temperature and firm if kept chilled.

BEES IN THE NEWS

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

“Moncton Researchers Abuzz Over Possible Arthritis Treatment Using Propolis,” 27 Nov 2015, Bee

Culture: University of Moncton researchers have discovered that propolis contains a compound “that reduces inflammation in laboratory tests. . . . When we did in-vitro tests, this compound is actually better than most compounds that are already out there on the market.” Their next step will be clinical trials, which must be approved by the Canadian health agency. As the population of Canada (and the U.S.) skews upward in average age, the demand for effective arthritis treatments will only increase. The U-Moncton researchers have formed a marketing company and hope that their propolis-based remedy will be on the market three years from now. To read more, visit:

http://www.beeculture.com/catch-the-buzz-moncton-researchers-abuzz-over-possible-arthritis-treatment-using-propolis/?utm_source=Catch+The+Buzz&utm_campaign=79d3621d0d-Catch+The+Buzz+4+29+2015&utm_medium=email&utm_term=0_0272f190ab-79d3621d0d-256261065

“Prehistoric farmers were first beekeepers”: 11 Nov 2015, BBC News (some details below also come from American Bee Journal’s coverage of this story, 16 Nov 2015)

Beeswax found on European pottery from an archaeological excavations - not only in Europe, but all the way to North Africa – show that human beings have been working with honey bees for nearly 9,000 years. Nature magazine, which published the study, says this shows that people’s “links with the honeybee date back to the dawn of agriculture.”

Using remains of “over 6,000 pottery vessels,” scientists have “piece[d] together a map of the honeybee at a time when the world had just emerged from the last Ice Age about 10,000 years ago.” The 9,000 sample that contained beeswax traces was unearthed “in what is now Turkey. By a few thousand years later, beeswax was detected across the Balkan peninsula, including Greece, Romania, Serbia, and then at sites occupied by early farmers in Central Europe.” Climate seems to have limited early beekeeping: no samples have been found north of Denmark, and “Ireland and Scotland also appeared to be off-limits to honeybees at the time.”

The evidence suggests that honey as a sweetener for food was a key factor motivating prehistoric cultures to keep bees; they also may have glued weapons and pots together using beeswax.

American Bee Journal notes: Given that beeswax is a unique lipid complex, its 'biological footprint', which is fairly degradation resistant, can be identified in the study of the organic residues preserved in archaeological sites.” The researchers add, "Now we know that beeswax was used continuously from the seventh millennium BCE, probably as an integral part in different tools, in rituals, cosmetics, medicine, as a fuel or to make receptacles waterproof."

Analysis of DNA leads researchers to think that the honey bee herself came from Asia about 300,000 years ago, then “rapidly spread across Europe and Africa. The bee's range contracted in Europe during the last Ice Age, but expanded in Africa.” According to American Bee Journal, “Farming emerged during the Neolithic era in various spots in the Middle East, and on occasions it had unexpected consequences: the opening up of forests to gain land and pastures encouraged the development of landscapes in which bushes and flowers provided environments suited to bees. In some way, the bees were the 'pursuers of agriculture', spreading their habitat as more farmland was being prepared.”

To read more, visit: <http://www.bbc.com/news/science-environment-34749846>. ABJ's story, which gives more details about the specific cultures studied, can be found at: <http://us1.campaign-archive2.com/?u=5fd2b1aa990e63193af2a573d&id=5d229296a1&e=e9ff21e0bb>

“Ancient Bees Gathered Pollen in 2 Ways”: 12 Nov 2015, American Bee Journal

“Were ancient bees specialists, devoting their pollen-collecting attentions to very specific plant partners? Or were they generalists, buzzing around to collect pollen from a variety of flowers in their midst?” Research just published in *Current Biology* suggests that “[b]ees living some 50 million years ago simultaneously relied on both strategies in foraging for pollen.”

The study examined “bee specimens . . . 44 to 48 million years old, with pollen well preserved across their bodies.” Bees exist in the fossil record as far back as the late Cretaceous period, making them contemporaneous with the latest of the dinosaurs. Pollen was analyzed from 11 bee specimens spanning 6 species of German bees. The pollen from the bees’ body hairs came from a “wide variety of nectar-producing flower types”; however, the pollen from the bees’ legs “came from a much narrower range of flower types, which the bees packed carefully into pollen baskets. That pollen was eventually taken to feed young bees back at the hive.” This shows that the bees did select pollen for use in bee bread from “only three or four major taxa of plants.”

To read more, visit: <http://us1.campaign-archive1.com/?u=5fd2b1aa990e63193af2a573d&id=36c78dde74&e=e9ff21e0bb>

“Forager Bees ‘Turn On’ Gene Expression to Protect Themselves from Microorganisms, Toxins”: 10 Nov 2015, Bee Culture

When bees develop into foragers and stop working as nurses, a new UC Davis study shows, they “turn on” genes that defend the bees from toxins and micro-organisms. Foragers seem to use “antimicrobial peptides—short sequences of amino acids with general activity—to reduce microbial growth in stored food resources,” which lets the bees guard honey and other food stores from “microbial spoilage.”

The study suggests that foragers are better able than nurse bees to break down compounds in nectar, before the bees process it into honey and store it. The differentiation of jobs in the hives had been shown by different “brain gene expression,” but this study is the first to suggest that the genetic differences “extend beyond the brain; different complements of active genes in a variety of tissues make each bee better suited for the job it needs to perform.”

To read more, visit: http://www.bee-culture.com/catch-the-buzz-forager-bees-turn-on-gene-expression-to-protect-themselves-from-microorganisms-toxins/?utm_source=Catch+The+Buzz&utm_campaign=d12e5655f3-Catch+The+Buzz+4+29+2015&utm_medium=email&utm_term=0_0272f190ab-d12e5655f3-256261065

“Superinfection Exclusion and the Long-Term Survival of the Honey Bee in Varroa-Infested Colonies”: Nov 2015, WSBA Notes for Beekeepers

What makes some colonies succumb to the viruses transmitted by viruses like deformed wing virus? A new study suggests that some colonies have evolved “superinfection exclusion,” even when their mite and virus loads are high. “Next-generation sequencing has shown that a non-lethal DWV variant ‘type B’ has become established in these colonies and that the lethal ‘type A’ DWV variant fails to persist in the bee population. We propose that this novel stable host-pathogen relationship prevents the accumulation of lethal variants, suggesting that this interaction could be exploited for the development of an effective treatment that minimises colony losses in the future.”

To read the full report, visit: <http://www.nature.com/ismej/journal/vaop/ncurrent/full/ismej2015186a.html>

Calling Mason Beekeepers: Now there's a blog about pollination and mason bees!

by Dr Margriet Dogterom, an expert in managing mason bees, has a blog focused on how to manage mason bees "using bee homes and mason bee tools." To find the blog, visit: www.Beediverse.com/blog

"Urban Environments Boost Pathogen Pressure on Honey Bees": 4 Nov 2015, American Bee Journal

This new study compared managed bees in urban settings with both rural, managed bees and feral bees. Researchers found that in urban environments, bees show "increased pathogen[s]." They looked at the impact of higher temperatures and "impervious surface areas" in urban areas affect how many pathogens bees come into contact with.

The study compared "15 feral colonies, living in trees or buildings without human management, and 24 colonies managed by beekeepers in urban, suburban, and rural areas within an hour's drive of Raleigh, N.C." Workers bees analyzed from all 39 colonies were examined "to assess the bees' immune responses and their overall "pathogen pressure." The feral bees had the lowest pathogen pressure of the three groups. The researchers found that "the probability of worker [bee] survival in laboratory experiments declined three-fold in bees collected from urban environments, as compared to those collected in rural environments."

In contrast, the bees' "immune response was not affected by urbanization. . . . Since immune response is the same across environments, we think the higher pathogen pressure in urban areas is due to increased rates of transmission," according to the study. "This might be because bee colonies have fewer feeding sites to choose from in urban areas, so they are interacting with more bees from other colonies. It may also be caused by higher temperatures in urban areas affecting pathogen viability or transmission somehow."

However, the feral bees, whether urban or rural, seemed to have greater immune response: "Feral bees expressed some immune genes at nearly twice the levels of managed bees following an immune challenge," Frank says. The finding suggests that further study of feral bee colonies may give researchers insights that could improve honey bee management.

To read more, visit: <http://us1.campaign-archive1.com/?u=5fd2b1aa990e63193af2a573d&id=6819c31627&e=e9ff21e0bb>

"Study Explores What We Know About How Neonicotinoids Affect Bees": 2 Nov 2015, American Bee Journal

"An international group of pollination experts . . . has published a second summary in as many years on the scientific evidence about the effects of neonicotinoid pesticides on bees." Although over 400 studies have come out in the past ten years, their findings often contradict each other. Politicians and farmers alike are left struggling to decide which studies to believe.

The team that has assessed the findings set as their goal "to act as honest brokers, providing an account of the evidence, its strengths and limitations, but without making any direct policy recommendations." In two separate reviews, they have given "a comprehensive overview of current scientific understanding of neonicotinoid impacts on pollinators . . . within the broader context of the many, interacting factors affecting pollinator health."

The most heated topic is field exposure to neonicotinoids. What constitutes danger to bees "varies enormously depending on many factors, including the type of insecticide, how it is applied and which pollinator species you consider. Current evidence suggests that bumblebees and solitary bees are more severely affected by neonicotinoids than honeybees."

To read more, visit: <http://us1.campaign-archive2.com/?u=5fd2b1aa990e63193af2a573d&id=5417bee9f9&e=e9ff21e0bb>

“Threat Posed by 'Pollen Thief' Bees Uncovered”: 12 Oct 2015 American Bee Journal

Some bees are very effective pollinators, but others act as “pollen thieves,” taking pollen to feed baby bees, but not doing a good job of pollinating flowers, thereby endangering some species of plants. Researchers are calling this “a co-evolutionary arms race between plants and bees. Some plants have fortified structures called anthers, where pollen is locked up behind a thick wall. The only way to open these 'pollen vaults' is through small pores at the tips. However some species of bees, such as bumblebees, have adapted to produce high-frequency vibrations to counteract this and get at the pollen, a process known as buzz-pollination.” Researchers examined the buffalo-bur, which is buzz-pollinated: over 80% of the bees who visit buffalo-bur flowers took pollen but “failed to contact the female floral parts, therefore contributing little, if anything, to seed production.”

“Nectar theft” has been studied before, but not much had been done to explore pollen theft. Bees who become pollen bandits tend to be “smaller, stay longer at each flower and visit few flowers in each run. Legitimate pollinators tend to be larger, buzzing bees which visit many flowers in many plants and are likely to help plants spread their pollen more widely.” Bee size is key: small bees’ limbs and organs “are too small fail to contact the female organs, while still taking away pollen grains to feed their larvae.”

The study compared European bees introduced to Mexico with native bees, and discovered that the European recruits tended to be pollen thieves, whereas the native bees tended to do a better job pollinating the native plants with which they had co-evolved – a new wrinkle in the increasing threats to native bees.

To read more, visit: <http://us1.campaign-archive1.com/?u=5fd2b1aa990e63193af2a573d&id=727432641d&e=e9ff21e0bb>

ANNOUNCEMENTS

Brand New Bee Suit & Gloves For Sale: John Prescott writes, “I have a brand new bee keeping suit with head cover and gloves which has never been worn. Paid about \$85.00. I would like to sale. Would appreciate your passing this on to the members. Suite Size is: XL. Glove Size is: Medium. Would consider any/all bids. -- 360-978-4530, Onalaska, WA 98570

WAS 2016 Conference will be in Honolulu, Hawaii, October 13 – 15, 2016: Talk bees on the beach over umbrella drinks! The University of Hawaii Honeybee Project at UH Manoa is hosting & extends a warm welcome to all beekeepers to attend. For more information, visit the WAS website: <http://www.westernapiculturalsociety.org/>

Local Honey is Still Available: Are you looking for a gift for that hard-to-shop-for person on your list? Maybe local honey is just the thing that would make him or her smile! Visit our website, click on Honey, then on “Buy Local Honey.” If you’re an LCBA member who is selling your honey, let Susanne know to be listed on the site.

WSBA Newsletter: Pick up your copy online at www.wasba.org: click on "Newsletters."

That’s all for now ~ take care, & bee happy!

~~ Susanne Weil, LCBA Secretary (Susanne.beekeeper@gmail.com; 360 880 8130)