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March 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:

Saturday, March 7: Gardening for Everyone

Where: Centralia College, Washington Hall lobby & classrooms

When: 9 a.m. to 1 p.m.

What: Kimo Thielges will be distributing Mason Bee blocks & information; Dan Maughan will have honey bee information at LCBA's table; thanks to our volunteers who are helping out. ***Remember, Gardens Support Bees!*** GFE's displays & talks might give new ideas.



Above, our March speakers: left, Community Outreach Coordinator Dan Maughan; Mentorship Coordinator Kent Yates (right) Gottfried Fritz at our Sept 2014 Honey Spinning workshop/party

Wednesday, March 11: LCBA Monthly Meeting

- **Package & Nuc Bee orders: 5:30 to 6:30 & during break** (*details in special section, below*)
- **Building Nuc Boxes:** Community Outreach Coordinator Dan Maughan will show his varied-sized cedar nucs & discuss their uses in colony management.
- **Using In-Hive Thermometers To Monitor Colony Health:** Mentorship Coordinator Kent Yates will present this, as well as the “Vivaldi board” (a moisture control approach that can be used year-round. Rumors that it plays classical music to your bees have not been confirmed...).
- **Spring management issues:**
 - **What should beekeepers be looking for in their colonies now?**
 - **When/how to do splits**
 - **When/how to combine weak colonies or consolidate them down to a nuc**
 - **If your bees died, what should you do with the equipment?**
- **Business Meeting:**
 - **Treasurer's Report** (*continued next page*)

March Business Meeting Agenda, continued:

- **Swarm & colony removals: new policy & volunteer signup sheet**
- **2015 Mentor Program: Call for Volunteers**
- **Spring Youth Fair, May 1-3: Call for Volunteers**
- **Beekeeping Q&A**

Saturday, March 21: Hive Assembly Workshop (Langstroth Hives)

Time: 10 a.m. to 4 p.m. *Please note: to reduce congestion at work stations, we have a 10 a.m. to 1 p.m. “shift” and another from 1 to 4 p.m. Please let us know which you’d like when you RSVP!*

Where: Chehalis: for details & directions, email susanne.beekeeper@gmail.com or call 360 880 8130 for directions.

What to bring: woodenware, frames, foundation – & questions! LCBA will provide tools, glue, & screws. If you need woodenware, check the “Beekeeping Supplies” link on our website, or call Susanne (see contact info above). We’ll build hive bodies, supers, telescoping covers, & put together frames; we’re not making screened bottom boards, as those are complex. Coffee, tea, hot chocolate & snacks will be provided. Attending this workshop is free; if there are more participants than equipment, first crack goes to members, but we expect that everyone can get their boxes on ☺ Children welcome!



Above, kids of all ages had fun assembling hive components at last year’s hive assembling workshop.

Wednesday, April 8: Monthly Meeting: Topics TBA

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

We’ll address package & nuc bee pickup as well as cover spring inspection issues & strategies for hiving bees, among other topics. Watch for the April newsletter for more details!

Saturday, April 11: Spring Hive Inspection Workshop – Weather Dependent

Where: Adna: for details & directions, email susanne.beekeeper@gmail.com or call 360 880 8130 for directions.

Time: 1 to 3 p.m. with Q&A to follow

What: Get hands on in a hive with mentors discussing best practices for inspecting bees and assessing spring colony health. There will also be a “dry demo” of hiving package bees. Please bring your protective gear. Children are welcome (please be sure they have protective gear, too).



Above, proud bee parents at 2014 Bee Pickup Day: left, Cody & Linnea Warren, right, Martin & Marcelle Stenzig

LCBA PACKAGE & NUC BEE ORDER INFORMATION

Thanks for your patience as LCBA has waited for details about Bee Orders. We're sorry that bee prices are higher this year than in past years, but that's true nationwide. We're thankful, though, that we can go in with Olympia Beekeepers to get a modest price break, and especially thankful to Renzy Davenport for handing details for us.

To place an order through LCBA, you must be current on membership dues; membership forms will be available at the meeting and can also be downloaded from our webpage (under the Membership link on our homepage).

Orders will ONLY be taken at our March 11 meeting from 5:30 to 6:30 p.m. and during the break after our presenters (if you can't be there in person, you can have a friend place your order for you). Order forms will be provided.

Package Bees: \$100 per 3 pound package of bees – choice of Italians or Carniolans. No deposit fee. Orders will be taken ONLY at our meeting – you can pay by cash or checks made out to Lewis County Beekeepers' Association. Please note: your order is a commitment; we can't make changes after orders are placed.

Extra Queens: \$30 apiece, Carniolans or Italians available.

Nuc Bees: Nucs are very limited in supply this year, so Olympia has capped our order at 50 nucs: orders for these will be first come, first served. The price is \$95 (no deposit fee). As with

packages, orders will be taken only at the meeting; cash or checks (made out to Lewis County Beekeepers' Association – no abbreviations please!) only.

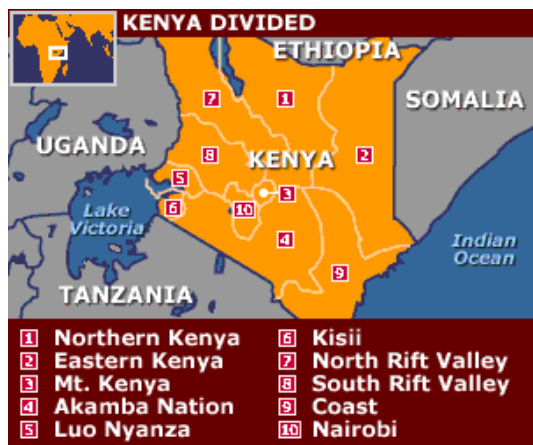
Picking up your bees: As always, we will get relatively short notice about pickup dates – probably only a couple of days' lead time. We will let members know as soon as we know – so please bear with us and prepare to be flexible. Package bee distribution will probably be the 3rd or 4th Saturday in April; we will distribute bees at the Master Gardeners' shed in Fort Borst Park, Centralia, as in years past. Same goes for nucs – short notice will prevail and this could be mid-week. Dan Maughan has volunteered to host nuc bee pickup at his farm in Adna.

LCBA MONTHLY MEETING NOTES: February 11TH

Beekeeping In Kenya: Myths, Realities, & Lessons Learned

By Susanne Weil, LCBA Secretary (slideshow accompanying is on our website: Monthly Meetings)

Background ~ The KiReeco/LCBA project: At our February 2013 meeting, Wilma Sofranko, one of LCBA's early members, asked LCBA to help her get WSBA's Apprentice Beekeeping curriculum to train subsistence farmers in rural Kisii, Kenya as beekeepers. Wilma had moved to Kenya and, working with St. Theresa's Secondary School and community organizers, formed the Kisii Rural Education and Empowerment Coalition, KiReeCo, to teach organic farming practices, among other services. Kisii farmers were eager to learn beekeeping so that they could sell honey to help send their children to high school, which is not free in Kenya. Raw honey in Kenya sells for about \$3 to \$5 a pint and is used not only as a sweetener, but for medicinal purposes.



Above, map showing Kisii (Kenya Democracy Project); right, the Great Rift Valley

WSBA was glad to help, and in February 2014, Wilma addressed us again with an inspiring slideshow about 58 beekeepers who had been trained. Four women had received hive kits and were ready to start keeping bees – and KiReeCo had over 300 would-be beekeepers waiting for training. Wilma met with members of LCBA's board about KiReeCo's need for volunteers to help teaching, as well as train shop workers to build Langstroth hive components. This led to a Memorandum of Understanding, adopted by LCBA's membership in August 2014. The MOU provided for LCBA to offer KiReeCo educational support, though we also conducted fundraisers to help them handle training costs. We also helped publicize their "sponsor a hive" micro-financing project: for \$60, individuals could pay for a hive

kit to get a beekeeper started: the beekeeper would repay KiReeCo out of their honey crop, and KiReeCo would use the funds to sponsor new beekeepers.

Traveling to Kenya: After getting passports, visas, travel insurance, and enough vaccinations to qualify as human pincushions, on October 12, LCBA Vice President Dave Gaston, Thad Stelzner (then-Mentorship Coordinator Gary Stelzner’s son), and I traveled to Kisii at our own expense to volunteer. Dave stayed for two weeks, Thad and I for five. Dave was to help Thad train a work crew in the KiReeCo shop to make hive parts and extractors. Dave also taught the first beginning beekeeping classes along with me; I was to handle the rest after his departure.



Left, LCBA Vice President Dave Gaston in the shop with Edward Ochoro & Abincha; right, Thad Stelzner

Our first challenge was packing. We each could take two 50-pound suitcases to check and 27 in carry-on. I took a set of unassembled deep and medium hive components that could be used as models. a set of hive tools, a smoker and spray bottle, frame rack, bee suit and gloves, bee books, and laminated photographs of assorted beekeeping topics (all left behind as a donation). At Wilma’s request, Dave brought a set of soccer uniforms for all the students at the St. Theresa’s OVC School, and these were a huge hit! Thad brought along some tools to use in the shop – unfortunately, we didn’t have a comprehensive list of what KiReeCo needed, so Thad ended up having to locate quite a few needed items in Kisii.



Above left, Theresa Orina with the “Busy Bee” singers at KiReeCo’s organic farming expo; right, students at St. Theresa’s Secondary School with the soccer uniforms that Dave brought.

After two days of travelling, we arrived in Nairobi, and the day after that, in Kisii. It was about an 8 hour drive across the Great Rift Valley through Masaai country, with its sweeping vistas and colorfully robed Masaai shepherds tending flocks of cattle, sheep, and goats, foraging on the arid plains. As we wound into the beautiful green highlands of Kisii, the paved highway across the Great Rift Valley gave way to dirt tracks that make four-wheel-drive roads in our Washington national forests look like speedways – the region got plenty of rain each afternoon, since our visit fell in the season of the “short rains” that turned the soil to bright red mud. The squares in the photo below show Kisii “shambas,” small farms: the lines from the tops of hills down into the valley represent what were originally entire family plots, but as families grew and land was subdivided to give each son a plot, there has been less and less for each young family to work with – further motivation to harvest honey.

Living conditions in rural Kisii: Our home base was at about 8000 feet: St. Theresa’s School, a private, Catholic high school for teens who have lost one or both parents. School founder Theresa Orina, along with all the students and staff at the school, offered us warm hospitality and friendship, and did all they could to make us comfortable. The food was amazing: few could afford electricity, so meat was butchered the same day, no hormones, antibiotics, etc. Vegetables and fruit, too, were fresh, so we enjoyed avocados, mangoes, and what we called “tiny awesome” bananas. We heard about food insecurity in Kisii – many farmers grow tea for exports (and are paid a pittance by buyers), leaving less room to grow food for their families and communities - but our hosts ensured we did not experience that insecurity ourselves.



Kisii “shambas” ~ small farms

Paradoxes of Technology: We lived in small rooms off the shop building, whose floor was still under construction when we arrived. Bottled water was available, but often we drank rainwater that was boiled or iodined; laundry we did by hand & hung on barbed-wire fences to dry. There was no connection to the electrical grid, so everyone vied to connect battery chargers to KiReeCo’s solar cell to power flashlights and cellphones. Yes, cellphones: American cellphones don’t work in Kenya, but thanks to companies like Nokia and Samsung - who researched this rural market carefully – everyone seems to have a phone, even banking that way. Kisii literally walk miles to visit “cybers” where they can charge their cellphones and get online.



Above left, paradoxes of technology; right, the shop viewed through Dave & Thad's bunk room

African bees – the hype v. the reality: Of course, what Dave and I were most excited to see were the bees! We'd done research online and seen videos of the highly defensive behavior of *Apis mellifera scutellata*: these were the bees brought to Brazil in the 1950s which escaped through “keeper error” and hybridized with local Italians, with results memorialized by *Saturday Night Live* and a host of bad horror films. Relatively little has been written about these bees in their African home, though, and most of what we knew was thanks to Dewey Caron's 2001 book, *Africanized Honey Bees*.

Fear of Bees: we were struck by many Kenyans' intense fear of the bees. Later, teaching a class at Asumbi College near Lake Victoria, beekeeping club students took me to see their apiary, only to find that it had been vandalized by nervous locals the night before: every top bar hive had been upended, the bees buzzing around unhappily. The students, deeply disappointed, but undaunted, were determined to fix their hives and continue (the college plans to launch its own Langstroth hive building project). In general, though, even Kenyan beekeepers tend to fear their bees. We were warned that the only safe time to inspect was in the hour before dusk – that daytime inspections were tantamount to suicide – and that bees could only be controlled by massive clouds of smoke.



KiReeCo bee, close up; right, rudimentary Langstroth hive boxes at St. Theresa's School

African Bees ~ First Contact: Dave and I, apprehensive but undeterred, immediately started hanging out by the four colonies housed in Langstroth hives at St. Theresa's. Two days after our arrival – I sneaked down to the three hives below the mushroom house (where KiReeCo plans to dry mushrooms for export) to watch the bees in action. They acted like pretty normal bees, bringing in loads of bright yellow and

white pollen from the sunflowers, kale, kalandria, & many other plants in the school's gardens. I inched closer, till I stood about five feet from one of the hive. A few girls flew up and buzzed me, and I hoped my medivac insurance wasn't about to come in handy: but the bees simply went on about their business. In fact, the entire time in Kisii, none of us were stung. The major difference in behavior that we observed was their speedy, somewhat hectic flight pattern. Dave called them the "ADHD bees": his video, on YouTube at this URL, shows their characteristic action:

<https://www.youtube.com/watch?v=A7TemdFQOU4>

The only Langstroth hive beekeeper we met outside KiReeCo, Edward Ochoro of the Borabu community, was one of the few we met who is genuinely comfortable with bees: he even put an observation hive above his bed! Edward took us to tour his apiary, where he hangs many of his hive boxes from trees to protect them from honey badgers and other potential predators. Here we first saw the massive propolizing tendency of these bees up close: knowledge that would serve us well.



Above, how Kisii bees propolize a hive entrance; below, beekeeper Edward Ochoro in his apiary; right, his observation hive . . . above his bed!



First Hive Inspection: Amid the flurry of school events and shop construction, it took a week before the stars aligned for Dave and me finally to inspect a hive. We suited up with Justin and Dismas, two teens at the school who worked the bees regularly. We had decided to try a combination of smoking and spraying sugar water, and we went as gently as possible. The intense propolizing of these bees, we reasoned, would make separating frames and boxes tricky – if boxes were jostled as we sawed through layers of propolis with hive tools, the bees would likely become highly defensive. Dave led, doing most of the hive manipulations; Dismas was tasked with the smoker; Justin with lifting boxes; I wielded the sugar spray bottle & a hive tool. Using a team of four meant that we could work quickly – necessary, given the waning light – yet gently. As the photos below show, Dismas was perhaps over-enthusiastic with that smoker, but we discovered that the blend of smoking and spraying really worked with these bees – that, plus working with extreme gentleness and care.

Finding the Queen: Dave found the queen on the very first frame – a beautiful, big, dark bee (unfortunately, the dimming light and our concern about working with care meant none of us had a camera on her). Most of the frames were foundationless: a deep and a medium were on the hive. The bees had filled both boxes almost completely, and we put on an additional box to help relieve congestion. After Dave left, I asked to inspect this colony again, wondering how fast they would build up and suspecting from their numbers that the extra box might have gone on too late, so they might swarm. Given our hosts' stipulation that we could only inspect in the hour before dark, the schedule of events didn't allow this until a week after Dave's departure, when I found far fewer bees and many swarm cells. They were building up rapidly by the time I left, working on filling the honey super. It would have been fascinating to try to take a super from these bees, but alas, we didn't get to try that.



Left, VP Dave Gaston suited up for a classroom demo; right, trying a little smoke with those African bees

African Bees Need a Better Publicist: Everywhere I went in Kisii, I found gentle bees who simply didn't match their wicked reputation. Were these really the fabled *Apis mellifera scutellata*? The darkness of that queen made me wonder, as did the dark color of many workers. Dewey Caron notes that *A.m. monticola*, the gentler and darker African mountain bee, is prevalent in east Africa between 6000 and 12,000 feet (see photo, below). At 8000 feet, we certainly could have been seeing *monticola* bees. However, many of the bees – see photo above – had the Italianate coloring, with the one very narrow black band closest to the thorax, seen in *scutellata* photos. Dewey notes, though, that “hybrids between [*monticola*] and *scutellata* exist in transition zones where the distribution of the two bees meet” (33). Could hybridization explain the relative docility of the bees we encountered in Kisii? Hybridization didn't

improve the disposition of Africanized bees in the Americas, where scutellata genetics dominate, but perhaps a mix of monticola and scutellata genetics might play out differently. We've sent a sample to WSU's APIS lab for genetic sampling and are waiting to hear their analysis.



Left, *A.m. monticola* (photo, Imkerei Schwarz); right, *A.m. scutellata* & *a.m. ligustica* (photo, Scott Bauer, USDA)

Advantages of African Bees: African bees seem to be resistant to both Varroa and Nosema: though both are present in East Africa, the bees remain robust. Foulbrood, so far, is nonexistent. Viruses? I had no way to tell, but saw no evidence of deformed wing virus or the CBPV “blackening” virus that affected some bees here in Lewis County last year. Further, year-round forage on plants that see relatively little pesticide use seems to help keep bees strong. We did not hear of any beekeepers who’ve realized the fabled 4 honey crops a year, but 2 were the norm for experienced beekeepers (and with better management, 3 might be feasible). It’s easy to see why promoting beekeeping, despite public fears, is on the rise.

The Ministry of Agriculture’s Pro-Honey Campaign: Honey is a moneymaker in Kenya as here in the U.S., so it isn’t surprising that Kenya’s Ministry of Agriculture is promoting it to farmers. Unfortunately, the message they put out is terribly oversimplified, and, if acted on, probably feeds fears of bees. During the organic farming exposition that KiReeCo mounted at St. Theresa’s School during our first week in Kisii, Dave and I staffed a table on beekeeping – a task that proved difficult, as many visitors spoke limited English and we spoke neither Ekegusi nor Swahili. A multi-lingual woman from the Ag Ministry appeared, to my great relief: I talked with her and watched her interact with visitors, which helped me see ways to communicate. But I was surprised when I heard her message: honey is easy to get! Just put out a box, bees will swarm into it, wait two months, and voila – a honey crop is yours. No inspection necessary! Neither was it hard to get honey supers off these bees, evidently, if one smoked them like crazy (which could help explain the very smoky taste of some honey I brought back, though I also tasted some wonderfully fruity, flavorful honey while in Kisii).

Misinformation in the Secondary Agriculture textbook read in high schools: The Ag Ministry’s textbook on Secondary Agriculture, too, contains some significant errors. Among these: “When a new queen is prepared, a cluster of bees take the queen and drone for their nuptial flight”; only 5 to 7 drones mate the queen; drones are killed by workers after mating the queen; queens cannot sting; bees are “vicious if handled.” The textbook does not mention bee space or reasons why it’s important to inspect hives, let alone how to inspect them. The Ministry’s message is further muddled by public folklore about bees, such as: if bees fly around your head, in a couple days something bad will happen to you; harvesting honey is hard because bees are “drunk with honey”; bees are “angry,” so you can only open hives at dusk. (Why dusk was never clear: with more bees in the hive, surely the risk of defensiveness

would be greater. We wanted to try a daytime inspection, but our hosts' anxiety about this was so high that we didn't feel it fair to stress them.)

Given these messages, I realized that I might have an uphill battle ahead in teaching beginning beekeeping classes. How to get people to see the need to inspect their bees when their own government is telling them it isn't necessary?



Left, a Ministry of Agriculture spokesman tells a visitor at KiReeCo's organic farming exposition about the ease of keeping bees & harvesting honey; right, "Mama Honey" (in head scarf) is skeptical about the need to manage bees

Teaching Beekeeping in Kisii ~ the Challenges: In five weeks, I taught eight short courses to 363 students. Unfortunately, the training schedule only let me team-teach with Dave once before he left; fortunately, though, watching him in action, I got a great model of how to teach the Langstroth concept, as well as how to teach hive inspection in a bee-less classroom. Most of the classes were set up in community centers or churches with no electricity, let alone the PowerPoint facilities and Internet access I've been spoiled by. When the "short rains" came each afternoon, they pounded on the tin roofs, making instruction impossible for the 20 or so minutes until they stopped. Many students had to walk – some as many as 15 miles – to reach training venues, arriving hours late. I was amazed by their dedication in even trying to get there.

"African Time": One fascinating paradox: Kenyans sincerely desire to learn, yet place minimal value on timeliness. Even KiReeCo organizers left for trainings late; in fact, each training began at least 2 hours after its scheduled starting time. When classes finally started, they opened with organic farming training refreshers that took about an hour – valuable, but less time for teaching beekeeping - and classes ended with explanations of how to form local beekeeping organizations and how KiReeco's micro-financing plan would work once hives were ready – again, clearly important, but that much less time for bees. The "two days" which, as an American, I had naively assumed would mean 16 hours of instruction (about the classroom time we give to cover the WSBA apprentice curriculum in our courses here) shrank to about 6 to 8 hours in practice, and given transportation challenges, many students missed much of even that. The Kenyan approach to time was a cultural difference that required a great deal of adjustment on our part; we felt a constant tension between trying to be respectful of this difference and concern that it meant needed training wasn't happening, with potentially serious consequences for new beekeepers' safety.

Teaching Through a Translator: Finally, time for translating cut even further into course material. English may be one of Kenya's official languages, but in rural Kisii, at any rate, very few people had a speaking understanding, and I didn't speak Ekegusi. I had to learn to frame material in short cohesive chunks that my translators could convey. In most cases, my translators were not experienced beekeepers – the time I got to teach with Edward at his Borabu community was a real treat and probably the most effective class.

So . . . I tried to learn the Ekegusi words for all things bee – or all things *enchoke!* The hive – *omotana*; honey – *oeoke*; wax – *obonchoa*; swarm – *risungi*; queen – *emena*; worker – *fundi*. For some bee concepts, there’s no word in Ekegusi: I asked Edward the word for “drone,” and he said, “We call them idle men”! No one I met knew Ekegusi equivalents for propolis, brood, varroa mites, etc., so these had to be described. Luckily, along with Dewey Caron’s lavishly illustrated hardback textbook, I had brought my own enlarged, laminated photos of queens, drones, workers, larvae, capped brood, drone comb, good brood patterns, capped honey, bee bread, etc. – because I knew I might not have other visual aids beyond the demonstration equipment I’d brought along. In most cases, I didn’t have an experienced beekeeper as translator, either, so the photos proved absolutely vital teaching tools.



Above, Edward & Susanne preparing class at Borabu, Edward’s community; right, interested students at Borabu

Student Attitudes: As teachers know, any class has students with varying ranges of knowledge. So too, a substantial minority of Kenyan top bar beekeepers studied alongside newbees. I treated them as a resource, beginning each class by asking them what they found challenging about keeping bees, hoping not only to engage them, but to show the newbees that their Ag Ministry’s easy assurances were misguided, in hopes they’d pay attention. At most trainings, people wanted to hear about honey harvesting first and foremost – and some, like “Mama Honey,” pictured above, were skeptical about all this inspecting stuff – so I quickly learned to explain that in order to harvest honey successfully, they first needed to know how bees work, and I made the more experienced beekeepers my allies in this.

Challenges for African bees – and Beekeepers: The number one complaints the beekeepers made: “the bees swarm all the time! They don’t make honey fast enough!” Having seen several apiaries before teaching the first class, I had some suspicion why bees might swarm, so this made a great starting point. Once I emphasized how swarming sets back honey production, I had a captive audience. First and foremost, lack of inspection means beekeepers don’t know when bees get congested. Next, badly made hives let moisture leak in through cracks, so bees seek dryer homes: this served as the first pitch for a well-made Langstroth hive box. Untended apiaries with loads of vegetation mean ladders for Kenya’s seemingly indestructible safari ants, who eat brood as well as food: one fix is clearing about a yard of ground around the hive, then wrapping the feet of the hive stand in rope, then drenching the rope in motor oil. I learned this from Edward, and it works. It was also rumored that growing mint near hives deters ants.



Left, a Kisii beekeeper's first stab at Langstroth frames; right, foot of a hive stand with sisal wrapping to deter ants

Package bees are unknown in Kenya, so catching swarms is the only way to get bees – and many complained that attracting a swarm was tough. To make a hive smell like bees is hard for a brand new beekeeper who doesn't have frames or comb for bait, so job one for newbees is to find someone who can help out, or find an abandoned hive from which to rob comb.

Other challenges: small hive beetles and wax moths. I didn't see these in action, but was assured they're there. A strong colony should be able to drive these out or at least coexist, so again, the focus went back to hive inspection – what else may be challenging your bees?

Incorporating Active Learning into a bee-less education program: Book-learning is important & lectures are useful, but nothing can substitute for actually getting hands-on with bees. In LCBA, we have hands-on mentor-led workshops, but in Kisii, the relative lack of experienced Langstroth beekeepers meant that in almost all regions where we trained, there were no apiaries where inspection techniques could be demonstrated, and transportation issues made taking a class even to a Kenya top bar apiary impossible. Given that many students were missing significant portions of the training and the challenges of teaching through a translator, we wondered how much was getting through to these students.

To help, at the first training, Dave had students come up and take apart our Langstroth demo hive to see how it worked, as well as the difference between well-made and poorly made hive boxes: both exercises seemed to help. We also play-acted how to inspect a hive. Starting with the second training, I posed students hypothetical cases in which I'd describe what I was seeing in a hive, frame by frame, then asked them what I should do. The students who participated seemed to be getting key points: to add hive boxes when 7 frames were built out, to know the difference between swarm and supersedure cells and how to handle each situation, etc.

Starting a Mentor Program: Given how hard it will be for new beekeepers to access an experienced beekeeper for help, I urged KiReeco to start a mentor program. They readily agreed, and we invited a dozen beekeepers who worked with Kenya top bar hives to come to St. Theresa's for two days of training on Langstroth hives, basic bee biology and behavior, and inspection techniques, a real highlight of my time in Kenya. It was great to talk with these beekeepers about their experience of the bees and helped me focus the remaining 5 classes.

The two who brought protective gear helped Justin, Dismas, and me conduct a hive inspection while the others watched from a safe distance. The effect was electric: even these experienced beekeepers were simply amazed that none of us got stung! Because of Kenyans' fear of bees, when they do look in on their

bees – usually only when preparing to rob their honey out of top bar hives – they go fast and rough, with predictable results. These beekeepers left determined to try more gentle techniques with their bees. Let's hope that catches on.



Left, Dave shows Langstroth hive components to students at our first class; right, Susanne leads hive inspection at mentor training

Setting up the wood shop & training workers: Unfortunately, the shop was not completed until two weeks after our arrival, just before Dave left, giving him only one day to work with trainees. Thad carried on, but he had to find equipment – a table saw, a router, and more – then get the shop set up for training. Next, he had to focus on basics: teaching the alien concepts of safety and precise measurement techniques. Thad worked patiently with his very willing trainees – Edward, Abincha, Clement, and Dismas – to convey them. It was clear that they loved working with Thad (I heard plenty of laughter floating out of that room while I prepped classes next door). Not only was he teaching them skills they knew they needed, but he did so with patience and good humor. He nailed hive components on the shop wall; Dave wrote the measurements alongside to help. The trainees watched him build hive boxes, screened bottom boards, frames, and notched migratory covers (a short-cut to offer a hive top with ventilation – saving the step of building an inner cover in addition to a telescoping cover), and hive stands: in the process, Thad taught them some basics of wood- and metal-working. Time constraints meant that he did not get to supervise them in making a production run, so we hope that the lessons took.



Above left, writing measurements on the shop wall; right, hive boxes built by Thad Stelzner



Finding Wood & the Hive Demand Backlog: Another challenge in hive production was not only finding affordable wood sources, but the time needed to cure the wood in a very humid climate. KiReeCo let us know that they had found a good source after we left, so hopefully hive production will get rolling and meet the backlog of micro-finance hives for the 360+ trainees. It will take some time for that backlog to be met, and we hope the beekeeping lessons won't be forgotten in the interim. As volunteers, we were left with serious concerns about the safety of these new beekeepers. KiReeCo was urged to suspend trainings until that backlog was met and a plan for harvesting and marketing honey put in place. From their point of view, though, scheduling more trainings to meet demand from growing numbers of subsistence farmers who want to raise and sell honey is a top priority. However, they are planning to expand the mentor program to offer new beekeepers support.

Kireeco/LCBA Memorandum of Understanding: After discussion with KiReeCo about our concerns, LCBA chose not to renew the MOU. Members who would like to know more about this are welcome to contact a member of the board. Speaking for myself, living in Kisii for five weeks, working African bees and meeting wonderful people, was an unforgettable adventure, both exciting and humbling. Perhaps in the future, we will learn whether the seeds we planted in Kisii come to fruition.

February LCBA Business Meeting

Donation from Pioneer West: Tim Weible introduced Taylor, manager of Pioneer West, who donated \$78 from Tim's mason bee workshop last year to support LCBA's Youth Scholarship Program. President Norm Switzler led all present voicing many thanks to Tim and Taylor!

Treasurer's Report: Treasurer Rick Battin reported that the balance in our operating budget is \$5,585.09, with \$855.53 in the Youth Scholarship fund.

2014 LCBA Audit: The audit of LCBA's books was presented by Gordon Bellevue on behalf of the audit committee: Gordon, Rick, and Steve Howard. Gordon reported that all outgoes from LCBA's account were clearly documented. Some deposits made during the time between Jon Wade's stepping down as Treasurer and Rick's taking on the position weren't clearly documented, though with reconstruction from board and monthly meeting minutes and Jon's files, what they were for (general fund, youth scholarship, or KiReeco) was clarified. One helpful development from the audit was Rick's developing a new form to record origin & purpose of all deposits, particularly cash deposits. Norm thanked the audit committee for their work.

Update on LCBA shirts and patches: Rick reported that Alderson's can provide an iron-on embroidered patch of our logo – in the shape of our county - and have ironed on bee suits, jackets, or any other garment of their choice, which members would bring to Alderson's for the ironing. These would cost about \$7: Rick is getting details from Alderson's about volume discounts and taxes. Norm called for a show of hands whether these should be ordered; many hands were raised with no objections, so Rick will pursue this and report back at our March meeting. Meanwhile, if you would like to buy a t-shirt, email Rick: rick.battin@gmail.com.

Membership Dues support our events & keep them free, so please join or renew your membership! Forms are available at our meetings, as well as on the website (on our homepage, click on the Membership link). To participate in group package bee orders, one must be current on dues. Dues are \$34 for first time joiners (\$10 initiation fee covers the name badge); \$24 renewals. The price is the same for individuals, couples, and families.

2015 Package & Nuc Bee Orders Update: Renzy Davenport, who bravely agreed to coordinate bee orders for Olympia Beekeepers as well as for LCBA, gave an update on progress. (***See final details in the Package & Nuc Bee order section of this newsletter, above.***) Packages with caged queens will cost \$100 apiece, Italians or Carniolans. The bees are from California. Extra queens will be available for \$30

apiece. The likely delivery of package bees will be the 3rd week of April, but as always, we have to wait for the word from the vendor. Nucs will be about \$100 as well, though we still do not have a fixed price: we should by the March meeting, when orders will be taken. We are being limited to 50 nucs maximum, so it will be first come first served to order them. Renzy was asked if the nuc boxes are to be returned for a deposit; no, there is no deposit for either package or nuc boxes. Renzy recommends hanging onto the nuc boxes after hiving the bees: they are great for swarm captures. Nuc delivery time, like package delivery, will be announced as soon as we know it.



Above, the Flow Hive is featured in this month's "Bees in the News" column – see below (photo, Wired.com)

Pacific Northwest bees? The debate: There was some lively discussion about whether we would do better to get local survivor bees. Renzy said that there is a misconception about what constitutes a Pacific Northwest bee. West coast bees are by and large bred in California. Pacific Northwest bees that are not bred in a controlled environment will mate with drones that very likely are offspring of California queens. When we capture swarms, are these Pacific Northwest bees or swarms from packages, or not far removed from package bees? Members noted that it would be interesting to hear more about Sue Cobey's questions about the origins of "survivor stock." The Pacific Northwest Queen Rearing Club is working on breeding local survivor bees. There was interest in a queen grafting workshop. Renzy and Norm recommended the Silverdale Queen Rearing workshop held by West Sound Beekeepers each year.

Mason Bee / Gardening for Everyone Update: Kimo Thielges and Dan Maughan asked that volunteers with filled mason bee blocks bring them to GFE on March 7 by 9 a.m. – or contact Kimo (kimosabe@compprime.com) or Dan (ultramafic@netzero.net) to arrange dropping them off. Clean starter blocks are also needed. The filled blocks will be given to interested members of the public and to Bob Taylor for his elementary school project.

Education Program: Education Coordinator Tomme Trikosko reported that we have a new Youth Scholarship student for 2015: Jana Girt of Onalaska. We are considering expanding the program to middle schools, as high school students tend to be involved with so many events. Dan Maughan is looking into options with additional districts. Journeyman study group: Tomme has heard from ten

members who want to undertake the Journeyman process and is looking for a venue. Finally, the Apprentice Beekeeping course starts on Feb 28, 9 to noon in the Centralia College cafeteria.

Beekeeping Q&A:

What should be done with hive components from a colony that died? Norm noted that hive parts can be re-used, but they should be dried off and either scrubbed with a bleach solution or flamed with a propane torch to get rid of mold, fungus, or spores from Nosema or other sources. It's worth looking to see if other bees are robbing the dead-out hive: if not, why not?

How to tell if a hive is alive when it's too cold to open boxes? The discussion above led to members noting that sometimes we see bees coming and going and assume a colony is alive, only to get a sad shock when opening the colony and finding it's died out. One clue that a hive is viable – in these days when it's often still too cool to open up and check – is if bees are bringing back pollen, something robbers won't do. Gary noted that he has lost a couple of hives: in one case the dead bees had plugged up the entrance, so it's a good idea to use a twig and scoop dead bees out through the front stoop if it is too cold to open the hive. Renzy noted that another clue that there's a dead-out hive is seeing shredded wax cappings on the bottom board.

Is it too early to feed sugar syrup? Finally, the issue of whether it is too early to feed liquid was raised: it's unseasonably warm, yet we could still have a cold snap. It was suggested that that feeding sugar syrup now would encourage the queen to start laying too early, before there's much forage. To assess a colony's food supplies, we can lift a hive gently from the rear – if it is heavy, there are food supplies; if not, feed hard sugar candy. Norm wondered if a 3:1 mix would stop the queen from laying, but Renzy said he hasn't seen any difference.

Monitoring colony temperature: Kent noted that inserting a thermometer in the hive is one way to know if a colony is alive: he has monitors and has seen a 20 to 30 degree difference between the outside temperature and temperature of the cluster, which is around 80 degrees. He'll give more details about this at our March meeting.

BEES IN THE NEWS

Thanks to Fran Bach, Linda Gorremans, Marnel & Grubby Groebner, Lindsey Hodge, Steve Norton, Kevin & Jeanne Reichert, Tomme Trikosko, Tim Weible, & the good folks at American Bee Journal and Bee Culture magazines & Pollinator Stewardship Council for news items.

There are lots more news items on LCBA's Facebook page!

The Flow Hive: Australian Beekeepers Say They've Found a Way to "Deliver Honey on Tap Without Stressing Out the Bees": *Slate.com*, 27 Feb 2015

It's all the buzz in bee circles: Cedar & Stuart Anderson, a father & son beekeeping operation in Byron Bay, Australia, are promoting the Flow Hive, a design they say will make honey extraction easy for the beekeeper and easy on the bees. After 3 years of field testing, they've launched an Indiegogo crowdfunding campaign, hoping that beekeepers around the world will help them meet their goal of \$70,000 to fund production. Slate reports that "they exceeded their target in fewer than five minutes and have already raised more than \$3.5 million and counting."

The Andersons' design features transparent plastic frames with pre-formed cells on which bees can build wax, insert nectar, & fan it down. Beekeepers can view the process through the transparent ends, checking when honey is ready for harvesting. When they judge that it is, beekeepers turn a lever, the frames split apart to open the cells, and honey flows out a hose & into a bottle. When the frame is drained, one flip of the lever and the frame resumes its original bee-friendly shape.



Cedar Anderson (left) and his father, Stuart Anderson, with their Flow Hive (Photo by Noli Ganda)

Many questions remain unanswered as the Kickstarter campaign rolls on (it closes April 5), from the sustainability of this kind of honey harvesting to whether the frames' splitting action really doesn't disrupt the bees. One thing's for sure: beekeepers around the globe are excited to hear objective results. Watch this space for more news as it's available, & visit LCBA's Facebook page for a lively debate on the possible pros and cons.

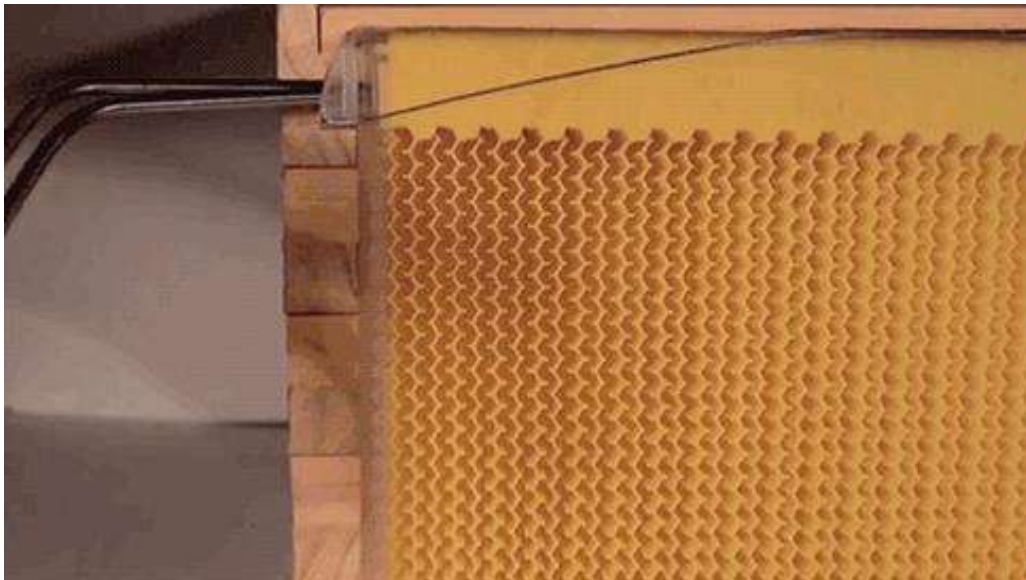
To see a video showing how the Flow Hive works, visit:

<https://www.youtube.com/watch?v=WbMV9qYIXqM>. To visit the Anderson's website, visit:

<https://www.indiegogo.com/projects/flow-hive-honey-on-tap-directly-from-your-beehive>

To read more, visit:

http://www.slate.com/blogs/the_eye/2015/02/27/flow_hive_on_indiegogo_delivers_honey_on_tap_making_beekeeping_easier_for.html



Plastic cells slide apart when lever is turned in the Flow Hive, draining honey (Wired.com)

“Stressed young bees may cause colony collapse”: *ABC News*, 10 Feb 2015

We know that factors like a strong nectar flow or other stressors can, epigenetically, trigger workers to switch up to forager jobs earlier than normal: now, a new study by scientists at Australia’s Macquarie University suggests that in stressed bee colonies, bees that begin to forage too young are dying, propelling the colony itself to collapse.

The scientists note that because foraging is difficult and risky – in comparison to earlier life stage jobs like serving as a nurse bee or processing honey – it “makes sense for the society if bees only go out foraging once they’ve made other contributions to the society.” But are these young bees ready for the job? Macquarie U’s study put radio tracking devices on bees from three test hives, then took away all older bees, so that the younger workers had no choice other than to forage if the colony was to eat.

The result? “We found the bees that started foraging when they were younger, survived a fewer number of days, completed far fewer successful foraging trips and they also took longer on each foraging trip,” says the lead researcher. It may be that the young foragers lack navigational experience; it may be that their flight muscles haven’t fully developed. A mathematical model forecast the impact of the young foragers and predicted that they couldn’t bring home enough groceries to sustain the colony. Complicating matters, fewer bees remained in the hive to nurture the brood. More tests are forthcoming, but if the researchers can confirm the outcome, it may lead to a future method for beekeepers to tell what colonies are in danger of collapse – when the foraging workforce is too young.

To read more, visit: <http://www.abc.net.au/science/articles/2015/02/10/4176386.htm> . To read the original research study, visit: www.pnas.org/lookup/suppl/doi:10.1073/pnas.1422089112/-/DCSupplemental



Radio trackers on the bees helped reveal younger foragers collected less food and died faster than their older counterparts (Photo, Naila Even)

“Bee Disease Reduced by Nature's 'Medicine Cabinet,' Dartmouth-led Study Finds”: *American Bee Journal*, 17 Feb 2015

Nicotine: bad for people – but good for sick bees? Dartmouth researchers have discovered that nicotine in its non-processed, natural form in floral nectar has chemicals – “alkaloids anabasine and nicotine, the iridoid glycoside catalpol and the terpenoid thymol” – that cut down infection by parasites in bees –

“significantly.” If farmers and beekeepers were to grow plants with nicotine in nectar in and near crops, they would be providing bees with “a natural ‘medicine cabinet’ [to improve] survival of diseased bees and pollination of crops.” The study was done with bumblebees, but researchers think that the findings could be relevant to other insect pollinators.

To read more, visit: <http://us1.campaign-archive2.com/?u=5fd2b1aa990e63193af2a573d&id=882f69d695&e=e9ff21e0bb> For a more detailed report, see Science News’ coverage: http://www.upi.com/Science_News/2015/02/18/Nicotine-and-caffeine-can-protect-bees-against-parasites/8391424297591/#ixzz3SMMGYnmZ



A bee on a blueberry bloom (Betty Shelton, Shutterstock)

“Oregon bans use of bee-killing insecticides on linden trees”: *The Oregonian*, 27 Feb 2015

Oregon’s legislature has enacted the state Department of Agriculture’s request to ban spraying “lindens, basswood trees and their relatives with any product containing dinotefuran, imidacloprid, thiamethoxam or clothianidin”: the four major neonicotinoid insecticides. Improper use of dinotefuran on blooming Linden trees killed over 50,000 bees in Wilsonville in June 2013, a story that got wide press. Six other major bee die-offs in Oregon have been traced to neonicotinoids. Aimee Code, pesticide program coordinator for the Xerces Society, said that “the vast majority of those die-offs were not the result of label violations. That means legal insecticide use was causing bee kills. I think Oregon really saw a need and addressed it.”

Lori Ann Burd, spokesman for the Center for Biological Diversity, argued that chronic, sublethal doses of these neonicotinoid insecticides may be at the root of bee die-offs worldwide (editor’s note: this is in dispute among entomologists): “Bees who are exposed to even tiny levels experience hits to their neurological function,” she said. “They can’t find they way back to the hive, they have less foraging success, they can’t communicate effectively, and they can’t fight off wasps. Those are the impacts that are really significant on the population scale.”

Oregonians who violate the new act “could lose their authority to apply pesticides. They could also face a civil penalty or other legal action.” Meanwhile, U.S. Fish & Wildlife is working to implement its ban on neonicotinoid use in national wildlife refuges: target date 2016. To read more, visit:

http://www.oregonlive.com/environment/index.ssf/2015/02/oregon_bans_use_of_bee-killing.html .

**“Almond Blossom Time. Revisiting some of the Almond Odyssey Adventures, Places and People”:
*Catch the Buzz, Bee Culture, February 2015***

In 2015, California’s almond industry requires approximately 1.7 million honey bee colonies to pollinate 860,000 acres. As bee losses mount and some migratory beekeepers have found the cost/benefit analysis daunting, Paramount Farming Co., which raises pistachios and almonds in the San Joaquin Valley, has bought Headwaters Farm, one of Florida’s biggest commercial beekeeping operations.

“In an environment where bee supply is always in question every year, it gives us a little bit of security to have our own bees,” according to Gordon Wardell, director of pollination operations for Paramount. Even with its own “house bees,” Paramount still needs 90,000+ colonies to make its almond grade. More and more almond growers have begun to buy up bee operations as commercial beekeepers have been able to supply less and less of their needs, as bee losses mount nationwide. With “bee rent” comprising 1/7 of their production cost, this “vertical integration” makes sense for almond growers.

Brad Pankratz, president of the California State Beekeepers Association, notes that not all almond growers become effective beekeepers. Pankratz commented, "Now, with the lack of forage and the drought, if you are not an experienced beekeeper you are really going to have a hard time with keeping bees if you don't know what you are doing."

Paramount, though, is undaunted. Planting “self-fertile” almond trees that need fewer natural pollinators didn’t meet their need. Now, they’ve named their bee division “Wonderful Bees”: they hope to sell honey, too. Meanwhile, they’re studying blue orchard bees as supplements – or successors – to the honey bees.

Oxalic Acid Registry for Varroa Mite Treatment Is Under Review: *Pollinator Stewardship Council, Feb 2015*

Oxalic acid has been used by British and European beekeepers for many years (10 for Great Britain; over 20 for Europe). This acid “desiccates the mouthparts” of Varroa with minimal impact on bees. It’s applied primarily by “trickling,” which avoids the heat or electricity needed for vaporization or spraying.

Randy Oliver’s assessment of oxalic acid can be found here: <http://scientificbeekeeping.com/oxalic-acid-questions-answers-and-more-questions-part-1-of-2-parts/> and <http://scientificbeekeeping.com/oxalic-acid-heat-vaporization-and-other-methods-part-2-of-2-parts/>

If approved, oxalic acid would be another arrow in the U.S. beekeeper’s Varroa-fighting quiver. To let the EPA know what you think, comment by March 6: visit

<http://www.regulations.gov/#!documentDetail;D=EPA-HQ-OPP-2015-0043-0001>

The comment section at Regulations.gov is here: <http://www.regulations.gov/#!documentDetail;D=EPA-HQ-OPP-2015-0043-0001> . Visit <http://pollinatorstewardship.org/> for more information.

“Hopguard II Gets an Emergency Section 18”: story courtesy of Fran Bach, *WSBA Newsletter* editor, Feb 2015

California Beekeepers report that “Hopguard has been authorized via a Section 18 emergency use registration,” effective through December 31. Beekeepers need to know that HopGuard’s “container label and usage directions have changed, so read them carefully. The Restricted Material Permit Program chemical number to use is 60711.”

FYI: “Because [Hopguard II] is not a federally registered pesticide, you have to either send unused material back to the manufacturer or distributor in unopened containers or, for opened containers, dispose of it in accordance with the Resource Conservation and Recovery Act regulations after 12/31/15.”

Questions: Contact Margaret Reiff at 916-324-3914 (mreiff@cdpr.ca.gov) or Jill Townzen at 916-445-7230 (jill.townzen@cdpr.ca.gov).

“Now Cleared for Landing at Airports: Bees”: *The New York Times*, 19 Feb 2015

Montreal has become the 14th world airport to host bees on its “green space.” Germany’s Hamburg Airport was the pioneer airport bee host in 1999, followed by Düsseldorf, Frankfurt, Dresden, Hannover, Leipzig/Halle, Nuremberg, Munich, Sweden, Copenhagen, Chicago’s O’Hare, Lambert-St. Louis – and, of course, SEATAC. Montreal set up hives last June as part of an environmental initiative: “For airports, beehives can be an easy way to flaunt green credentials while putting space to work in fields that legally cannot be built on. And bees are endearing in a way carbon credits, cardboard recycling and composting are not.”

The lack of agricultural pesticides at airports – and urban beekeepers’ need for places to keep bees – has led to this growing movement. O’Hare in Chicago has the biggest apiary with 75 colonies. European airport apiaries, though, use “pollen and honey as biomarkers to detect pollutants.” In 2009, Malmo Airport started to test its colonies’ honey and beeswax and got good news: “levels of heavy metals, volatile organic hydrocarbons and polyaromatic hydrocarbons are well below European Union limits, and have remained consistent from year to year. “

This result has surprised many who thought of airport environs as polluted, but Elina Lastro Niño, a UC Davis entomologist, thinks that if airports can avoid using pesticides, they can be excellent bee hosts with many opportunities for public education.

Are bees safe from mid-air collisions? No, but these incidents seem rare. Swarms that disturb airport action are more likely, but airports like O’Hare have an on-site beekeeper to manage such events. Meanwhile, Montreal and O’Hare, among other airports, hope to market their own honey.

To read more, visit: http://www.nytimes.com/2015/02/24/science/now-cleared-for-landing-at-airports-bees.html?_r=0



Bees cluster at the base of a hive located on an outlying field at Montréal-Mirabel International Airport in Mirabel, Québec. Credit Danielle Beurteaux

“Beekeeping within cities raises some concerns: hives are already allowed in Sacramento, San Francisco”: *The Sacramento Bee*, 15 Feb 2015.

Los Angeles may join New York City, San Diego, and Santa Monica in permitting urban beekeeping. Some continue to oppose the initiative out of fears for public safety, particularly given the influx of Africanized bees. Others want to help bees and get better-pollinated gardens, and argue that careful beekeeping mitigates risks. And beekeeping groups are on the rise: “The San Diego Beekeeping Society has seen its membership surge from about 100 people five years ago to roughly 1,000 members now.” The association let the county know that regulations requiring that “hives be kept 600 feet from neighboring dwellings, were outdated and unrealistic given the size of their lots.” The county is now looking at revising its requirements to permit beekeeping with fewer restrictions.

To read more, visit: <http://www.sacbee.com/news/state/california/article10312841.html>

ANNOUNCEMENTS

Got More Bees Than Forage? Want to Place Some Bees on a Space with Good Forage?

Two farms – one in Centralia, one in Mossyrock – would like to host bees for pollination. Here are the details – please contact Amanda and/or Stephanie if you are interested.

From Amanda Baldwin in Centralia: If anyone is looking for property to house some bees on, we have 40 acres, with scattered trees, fruit trees, and blackberry brambles of course :) Please contact: baldwin.amanda.j@gmail.com .

From Stephanie Grose in Mossyrock: I would love to find some honey bees or mason bees for this season. I have a small 5 acre farm in Mossyrock, Washington. Please contact: stephaniegrose@tds.net .

Time to Register Your Hives with WSBA for 2015! It's that time again . . . WSBA encourages beekeepers to register hives: registration fees help support honey bee research at WSU. Did you know - not registering hives actually works to drive down compensation to commercial pollinating beekeepers? To learn more, visit WSBA: <http://wasba.org/register-your-hives/> .

Cost of hive registration: for 1-5 hives: \$5; 6-25 hives, \$10; 25-100 hives, \$25. You can find the form at the WSBA link, above, as well as on LCBA's website under Upcoming Events.

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

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

Last, but not least: LCBA's Facebook page is up to 288 "likes"! If you're on Facebook & haven't seen our page, type "Lewis County Beekeepers' Association" in your browser & visit!

That's all for this month - take care, & bee happy!

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