*Visit LCBA Online:* [www.lewiscountybeekeepers.org](http://www.lewiscountybeekeepers.org)

# May 2018 LCBA Newsletter

## *In This Edition:*

**Upcoming Events (2 -4):**

- **May 10th Meeting – AZ Slovenian Hives;**
- **May 26th Hive Inspection Workshop**

**Lewis County Master Gardeners' Annual Plant Sale, May 19th – 20th (5)**

**Notes from our April 12 Monthly Meeting**

- **Speaker, Kevin Mills of Hive 5 Bees: Sustainable Beekeeping in the PNW (6 - 11)**
- **Business Meeting Notes (11 - 12)**

**2018 Youth Scholarship Students & Their Newly Hived Bees (13)**

**Bait Hives – Some Strategies Shared by Dr. Dewey Caron (14 - 16)**

**Bees in the News (16 - 24)**

- **Fumagillin is going off the market (XXX)**
- **Refrigerating honey bees to fight mites, colony collapse – WSU Newsletter**
- **New neonicotinoid alternative Silvanto found to harm bees' memory**

**Announcements (24)**

*Questions? Suggestions? Resources you'd like to share, stories you'd like to tell? Please contact LCBA Secretary Susanne Weil: secretary@lcba.community or call 360 880 8130.*

# UPCOMING EVENTS

## Thursday, May 10: LCBA Monthly Meeting

## Debra Langley-Boyer, West Sound Beekeepers: Slovenian A-Z Hive

*Above, Slovenian AZ Hive (https://www.mybeeline.co/en/p/whats-the-buzz-about-slovenian-az-beehive )*

**Where:** Centralia College, Washington Hall 103; 701 W. Walnut, Centralia, WA 98531
**When:** Social Time, 6-6:30 pm; Speaker, 6:30 – 7:30 pm; Business Meeting, 7:30-8:45
**What:** Debra Langley-Boyer will share information about the AZ Hive: in this design, bee colonies are placed in a covered house or shed; hives open from the back, enabling beekeepers to remove frames one at a time without lifting heavy boxes. Your back may be interested in this presentation! Followed by business meeting.

## Saturday, May 26: Late Spring Management Workshop

*Above, Cody Warren leading a hive inspection at last year's spring management workshop.*

**Time: TBA, but probably we'll start around noon**

**Place: Please email secretary@lcba.community for address & directions.**

**Topics:** Working with this year's installed packages and nucs to assess & aid colony development, prevent swarms, & more. Please bring your questions, and of course your protective gear; LCBA will provide refreshments

**Saturday May 19 – Sunday May 20:**

**TRIFECTA BEE EDUCATION EVENT**


**What:** Tom Seeley (*Honeybee Democracy*) & other entomologists will lead hive inspections & speak on their research. Topics include: Honey Production; Bees & Agriculture; Honey Bee Hygenics; & more. Sponsored by Brushy Mountain/Ruhl Bee Supply. Guest speakers' hive inspections will be at a special "pre-event" that you must reserve specially as part of your reservation: limited seating, $49.37 per person. For details, visit registration URL below.

**Where:** Best Western PLUS Hood River Inn in Hood River, OR

**Price:** $95.88 To register, visit: https://www.brushymountainbeefarm.com/trifecta-beekeeping-event. For lodgings, the Best Western PLUS Hood River Inn is offering a discount rate for this event. When making your reservations, please specify the code "BGBees".

## Thursday, June 14: LCBA Monthly Meeting

## Speaker: LCBA Vice President Bob Harris ~ The Making of Honey

*Above left, Bob's honey won first prize in 2012, the first year that honey was judged at the Fair for many years. Right, Bob wearing the Bee Hat Of Authority.*

**Where:** Centralia College, Washington Hall 103; 701 W. Walnut, Centralia, WA 98531

**When:** Social Time, 6-6:30 pm; Speaker, 6:30 – 7:30 pm; Business Meeting, 7:30-8:45

**What:** LCBA VP & founding President Bob Harris has been keeping bees for 30 years. He will share insights into how bees make our favorite bee byproduct – honey! Why does honey crystallize? Is this desirable or not? How can you best store honey once it's extracted? Bring your questions for a sweet evening! Business meeting to follow with news about our Summer Potluck and our exhibit at August's Southwest Washington Fair.

# Friday, June 15, & Saturday, June 16
# WSU-Pullman Queen Rearing and Bee Breeding Workshop

*Above, Sue Cobey leading queen rearing class.*

**Where:** Washington State University, Pullman campus

**What:** "Ready to take beekeeping to the next level? For those of you who already have a working foundation in beekeeping, WSU's bee team is offering an event to introduce you to fundamental tools for stock improvement. This workshop is designed to improve your understanding of queen rearing, bee breeding systems & selection methods though a combination of presentations and hands-on demonstrations. We will also introduce you to the more advanced techniques of instrumental insemination and cryopreservation. Plan on two all day meetings. The time of day and schedule of activities will be sent with your registration confirmation."

**Instructors:** Susan Cobey, Jennifer Han, Brandon Hopkins, Melanie Kirby, Tim Lawrence, Nick Naeger and Steve Sheppard. **Registration** is $275/person. To register, visit: https://app.smartsheet.com/b/form/02420575d11d476d88252d9e90cec89f

**Questions?** Please call WSU's Department of Entomology at 509-335-5422.

# Saturday, July 14: LCBA 10th Annual Summer Potluck

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

**When & Where:** 4-8 p.m. [FYI, it may start earlier – see May Newsletter for updates], Lintott Alexander Park, Shelter #1; 1101 Riverside Dr, Chehalis.

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

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

**Drawing for 2019 Youth Scholarship Program:** Bee gear, gift certificates, & fun items will bee available for those who buy $1 drawing tickets. If you'd like to help, please consider bringing an item to donate!

# 2018 WSU Lewis County Master Gardener
# ANNUAL PLANT SALE

**Where: SW Washington Fairgrounds ~ Exposition Hall**

**When: Saturday, May 19, 9 a.m. to 4 p.m.**

**Sunday, May 20, 10 a.m. to 2 p.m.**

**What: Thousands of plants – all grown in Lewis County by local Master Gardeners – for sale! Select from over 1,000 tomato plants, including many heirloom varieties. Other plants include annuals, perennials, shrubs, trees, and much more!**

**Questions? Call 360 740 1216; visit website, http://lewis-mg-mrc-org**

# Notes from LCBA's April 12 Meeting
# Speaker: Kevin Mills, Hive 5 Bees
# Raising Queens in the Pacific Northwest & Other Subject

*Above, Kevin Mills with His First Bees in Manitoba, 1999*

LCBA President Kevin Reichert introduced Kevin Mills, known to many as the owner of Mills' Diner and Hive 5 Bees in Rochester. Kevin R thanked Kevin M for his donation of three nucs to LCBA's club apiary last year. Kevin M loves talking bees and was delighted to be invited. Even though he has been keeping bees since 1999, the more he works with bees, the more he feels he doesn't know. He asked for first year beekeepers to raise hands, and many were present.

***How Kevin Got Involved With Bees:*** Hive 5 Bees was founded by Kevin and his wife Amanda in 2016. In 1999, Kevin started with bees in Manitoba. His first year, he had great success with lots of honey. Sure, he got stung, but Kevin noted for the new beekeepers that that is unusual: you have to upset the bees to get stung, and if you're calm and gentle, you can usually can avoid getting stung most of the time.

***Hive 5 Bees History:*** One of the singers in Kevin's Puyallup group was interested in bees and asked him to manage a hive for him. Kevin was glad to try this, and he and his wife agreed (after some discussion!) to get two hives to manage alongside his friend's. Then the bees arrived – and he got a hive packed with bees in March. This amazed Kevin because in Manitoba, no hives look that fat as early as March. He decided to split them and sell the splits; he let them raise their own queens, then put an ad on Craigslist. By the end of that day, he had sold the three splits – and saw an opportunity. In 2016, he made 90 nucs in 2016 and sold them. His original stock came from a beekeeper in Battle Ground, a mix of Carniolans and Russians. In 2017, he sold around 230 nucs, and this year, it will be around 250. He sold out of local nucs months ago. Still, "if anyone asks me, it's still a hobby," Kevin said.

***Sustaining An Apiary:*** Even having kept bees in Manitoba's colder climate with shorter active bee season, Kevin said that he finds southwest Washington to be much more challenging: he wants to understand our climate's differences better. Also, he was amazed to see how things had changed in terms of Varroa mites since he had started with bees in 1999. He heard about huge losses among commercial beekeepers. He had 40% losses this winter, and it hurt, but we can learn. Winter losses are your friend – they help you sort weak from strong colonies. Kevin is

now more aggressive with mite treatments and no longer leans toward methodologies that might have been cheaper: he thinks it is worth spending a little extra money. Dan Maughan asked what Kevin recommends for treatments: Kevin answered that he looks carefully at what Randy Oliver (scientificbeekeeping.com) is doing with oxalic acid. He has used Mite-Away Quick Strips (MAQS): there was more queen mortality than he wanted to see, but he felt the treatment worked, as does oxalic acid. There are many methods to apply: the main thing is to know your mite situation and deal with it.

*Above, inspecting bees; right, a over-wintered hive that Kevin was able to split the week after inspecting.*

***Two Key Strategies: first, Kevin highly recommends a video titled "The Sustainable Apiary," by Michael Palmer***, a backyard beekeeper who focuses on top bar and sustainable approaches: you can find it on YouTube at https://www.youtube.com/watch?v=nznzpiWEI8A. Kevin loves to sell nucs, but he doesn't want to see people having to buy new bees year after year because their bees died. One client got six nucs, and all the bees died. It reminded Kevin of how important it is to learn to make nucs yourself! If you start this year with two hives, and take advantage of LCBA's mentorship program, why not see if you can make a nuc?

***Second, We Need To Consider Selective Breeding for Mite-Resistant Bees:*** As long as we have wild swarms from feral bees tht have survived on their own we have a basis for success in crossbreeding.

***Bees Are Livestock:*** Kevin said that the biggest take-away from his talk is this point – bees are livestock, and like any livestock, they need to be consistently managed. People may be well intentioned and want to do organic beekeeping – there are some "organic" mite treatments, like oxalic and formic acid – but to sustain our bees, we must treat them. Kevin said, "Those who say I'm just going to put them out there and let them bee. … that's like taking a teacup poodle and releasing it in the Serengeti."

***Spring Assessment:*** Kevin asked who was a second year beekeeper and had overwintered bees successfully: many had! He complimented them on a great achievement – and cautioned that now, it's time to assess their condition. What you want to see: lots of bees and a great brood pattern. Those bees in his pic he was able to put on a super the next week. To assess hives, use your senses: sight, smell, sound (maybe not feel so much, Kevin quipped).

***Smell:*** Kevin explained the danger of the brood disease, American Foulbrood, which, Kevin noted, is called this for a reason. A hive should have pleasant odor of beeswax and honey; an AFB hive smells like curdling milk. The disease is fatal, highly contagious, and hives with it must be burned. Kevin Reichert noted that foulbrood fortunately is now rare here. Kevin M

agreed, noting that a number of things could cause a bad smell: mold, lots of dead bees on bottom board, etc. If there's a bad smell, check it out.

***Sound:*** A low, quiet hum is good; a loud, roaring is sign of queenlessness. Embedded in Kevin's PowerPoint, which is available on LCBA's website under the Monthly Meetings link: in his slideshow, a video is embedded which gives an example of a "good sound" from the fanning of wings. Linda Bartlett asked how you know a hive is queenless: Steve Howard answered that a hive with a queen will sound normal, and bees won't be moving around erratically in agitation. Gottfried Fritz noted that with several hives in one place, you can look at flight patterns: if bees are coming out on the landing area, messing about, not flying out, then maybe a there is a problem with an unproductive queen. Bees in a healthy, queen-right hive will be busy foraging.

*Sight: which colony would you split? The one on the right displays an excellent brood pattern; the one on the left shows bees covering spotty brood.*

Kevin R asked those who already have bees if they know the defensive sound: all agreed that the difference between the mellow bee sounds and the upset bee sound is something you learn fast. Kevin M said that in Arizona, he had observed Africanized bees that acted like bees on Starbucks, always wired. Dan asked if they looked different: Kevin said not that he could see, and noted that the person whose bees he was observing specialized in hiving Africanized bees and keeping them. There is also some bad press on them: Kevin thinks they are not really as bad as many say.

***Mites Bring Viruses:*** Kevin urges us to be aggressive in mite control in part because of the viruses they vector through the incisions they make in the bee (see photos below). Deformed wing virus is known to be transmitted by Varroa mites; Gottfried Fritz noted that it is not certain that mites cause Chronic Bee Paralysis Virus, but that disease is contagious, virulent, and has no cure. You see the bees trembling – like the walking dead, Gottfried said. If a severe infestation occurs, it may be best to seal up the hive so that robbers cannot transmit the disease, which can leave particles in honey. Kevin emphasized that even if you see viruses, treat: as the colony gets weaker, other bees will rob that colony out, and then you get the "mite bomb" effect of mites getting taken to other hives. If you don't treat, you may be helping spread the problem. Dan asked Kevin what time of year he usually sees CBPV: Kevin said usually late spring. Dan asked if used equipment promotes CBPV: Kevin said that it can, so you must clean used woodenware (a bleach solution will do the job). Also, if you think that a colony died because of a mite-borne virus, remember the persistence of viral matter in honey and wax, and don't feed that honey to other bees.

*Above left, a bee with Deformed Wing Virus; right, the black bee has Chronic Bee Paralysis Virus.*

On Kevin's slideshow, he shared a short list of treatments; he encourages treating in the spring and late summer. Be sure to read the package directions. Also, some treatments are temperature sensitive. He treats in spring and late summer. Many also treat in fall, as the bee population drops and the mite population rises. When the colony has less brood in which mites can lay eggs, that's a good opportunity to knock out adult mites. Both Kevins noted that you can treat with oxalic acid vaporization in winter to take advantage of the broodless window.

***Queen Breeding (for details on queen breeding, please see Kevin's slideshow on the LCBA website under Monthly Meetings):*** Kevin noted that he doesn't see himself as an expert in queen breeding, but he has learned. He pointed out sources of local queens: Lori Miller (Roy Miller Compound), Olympic Wilderness Apiary on the Olympic Peninsula, and Pacific Northwest Queens in Battle Ground. All of these raise their own queens. You don't have to raise queens to breed selectively: you can do splits. In Manitoba, Kevin bought hives with good characteristics, good buildup, low Nosema in winter, no aggressive demeanor: then, he kept records throughout the year, and would breed from queens from the best hives. Kevin noted that you can spend a lifetime focusing on one area about bees, but don't let queen rearing intimidate you: it is doable. However, if you don't want to raise queens, you can support local queen rearers. Kevin says that what he does is not as scientific or precise as what professional queen breeders are doing, but it works.

Gottfried asked what the best time is to split colonies in our climate? Kevin answered that we had an early spring in 2016, and he had thought that he could split colonies in late March / early April, and thought he'd have queens and nucs ready early – but, oops. Kevin now thinks that late April / early May is the best time here in the Pacific Northwest. The bees need to have good forage and consistent weather so that the queen can get well mated; average temperatures should be around 70 during the day. You have about a week and a half window for a virgin queen to do her mating flight, so if you want to split a colony, work with your mentor, build the hive up, and then, if you have one strong enough, when weather is ready, do it.

Dan asked how long Kevin leaves a split alone before inspecting and checking: Kevin said that he tends to fuss with them and knows he shouldn't. But if you do a walk away split, or if the bees are raising their own queen, don't go in sooner than 10 to 12 days: otherwise, you run the risk of possibly damaging the queen cell that is on the comb when pulling up a frame. Don't ask how he knows this! You could even wait two to three weeks to look for laying.

If you have double deeps and want to do a split, you can put a queen excluder between the boxes and let the queenless bees raise their own queen, and the warmth of the two colonies is beneficial

to both. It may be a good idea to turn one of the boxes 180 degrees so that the entrances are on different sides, to prevent drifting. With the split, some of the younger bees will shift from hive duties to foraging to help build the colony. You could even try this approach with making a nuc, though you do need to know where the queen is.

***Some Queen Rearing Tips:*** You only need three frames of bees, brood, and honey to begin a NUC. Make sure there are eggs present for the bees to rear queens from. The queen does not have to be located to make these splits if planning is used. Three frames of brood and honey can be shaken off and placed in a super above a queen excluder. Remove after at least 4 or 5 hours. Dan asked if he puts capped brood into the nuc. Kevin said that he looks for a balance: if you have more capped brood, you need fewer loose bees, but if you have much open brood, then you need more nurse bees. The key is balance: don't do anything to the detriment of original hive.

If you're going to graft, Kevin urges, get magnifying glasses! Kevin has learned to graft by watching at Oliveras, one of the major Central California queen breeders, and he saw a woman who grafted incredibly fast. He also noted that royal jelly actually tastes bad – he saw some, thought would be good for him, so he ate it, and . . . yuck. Kevin noted that grafting is a fascinating process: the new queens build up fast to a peanut sized cell, and it is an awesome feeling to see that you and the bees have done this.

Kevin had two grafting spoons on hand, and he gave them to Youth Scholarship student Caleb and one to Stevan Mayer.

Kevin noted that he has Kona nucs for sale – he is offering a $145 special price for LCBA members. Also, he and Harold Weaver of Beeline Apiaries were offering a one day bee class on April 21; finally, Kevin is selling Manitoba honey – contact him if you are interested.

*Kevin and his wife, Amanda, in the apiary.*

Kevin left us with this thought: he got started with a mentor who was in his 70s; his mentor loved to get stung, and his idea as a teacher was to get those people stung up, and then, if they still wanted to keep bees, he would work with them. Kevin does not teach this way, though!

***Questions:*** Peggy Hammer lost all three of her hives this past winter after having had a successful first year. She treated for mites and used a moisture box, but still, the bees died. She has one new package coming, so what should she do with boxes of dead moldy bees? Kevin said that she could put frames and woodenware in the sun (not out at night, lest you attract raccoons, etc.) and let them dry off, then cleanse them. You can use paramoth to kill any wax moths, and

then seal up the frames so that nothing can get at them. It's important to have some sort of rodent control. Kevin Reichert said that if the bees did not die from disease, you could put the honey frames on new bees to help them build up. Mel Gregorich suggested putting vinegar water on the frames to clean the mold (including the comb). Kevin R also said that if the mold is really bad, it may be best to destroy the foundation. The bees can clean up mold to an extent, but if it's really bad, why put them through it? Kevin M reminded us that bees are livestock: why subject them to bad conditions more than you need to?

Kevin Reichert told the audience that Kevin Mills is an accomplished singer, and asked him for a song. Kevin gave us a great a capella rendition of "Sixteen Tons" – there is a video on our website at the Monthly Meeting link! Everyone thanked Kevin for a very informative and entertaining presentation.

## April 12th LCBA Business Meeting

LCBA President Kevin Reichert welcomed everyone; before Kevin Mills' talk, Kevin noted that we have some announcements. First, the black locust trees that Gottfried Fritz donated for the Holiday Potluck raffle were available for pickup. 4 of 5 people who had won a gift certificate for a tree were present and picked up their tree; if you know someone who won a tree, but missed this meeting, please let them know to contact Gottfried. Gottfried gave some tips: these black locusts should be planted like a bare roots fruit tree. Don't fertilize them, don't use a lot of compost, and be sure to water them this summer: within three years, they should be going strong. Also, it's a good idea to put them in protected place or screen them, because deer and rabbits like tender plants. (VP Bob Harris commented, "deer and rabbits are tender, too….").

***Treasurer's Report:*** Treasurer Rick Battin reported that our main account balance is $29,274.16, of which $22,729.30 will be to cover the rest of the cost of bee orders (we gave Beeline Apiaries a downpayment of half the amount), meaning that our true balance in checking is $6544.86. Expenses since the last meeting included $10 to register the hives in our club apiary with WSDA; the Beeline order downpayment; $78.65 for notebooks for our beginning beekeeping handbook; Youth Scholarship equipment order to Beeline (tax free because of our apiary registration); $612.60 insurance; $138.80 for the new, more compact, better ventilated observation hive. Our savings account balance is $5,000.89; the Youth Scholarship account has $1,773.20 after the funds were transferred to our main account to cover the students' bee equipment and package bees. Finally, Rick will be ordering new checks with an updated address.

***Community Outreach:*** Dan Maughan had catalogs from Beeline and Mann Lake for those who wanted them. Also, Dan announced that we will have a booth at the Spring Youth Fair again this year, and he sent around a sign up sheet for volunteers. For both the Youth Fair and the Southwest Washington Fair, our major opportunities to share information about bees with the public, volunteers staff our booth for roughly four-hour shifts to answer basic questions. We usually have three to four volunteers on deck at any given time. This year, the Youth Fair is offering free Friday evening admission and parking to attract more people. Dan had wristbands and tickets for volunteers to give out this evening and got all the shifts covered.

***PNW and BeeInformed Honey Bee Colony Loss and Management Surveys:*** Secretary Susanne Weil distributed handouts with URLs for these two important honey bee health surveys and urged members to help bee scientists like Dewey Caron help us by filling them out. Dr. Caron will be our October speaker and will let us know how Lewis County losses and management practices compare with the Pacific Northwest overall.

***2018 Beeline Bee Orders – Update:*** Following the break after Kevin Mills' talk, President Kevin updated us on bee order deliveries. April 29, the scheduled pickup date, is forecast to be sunny, but Kevin reminded members that weather can change things fast. There will be an email update if anything changes. The long- range forecast for the scheduled April 19th pickup at Beeline is for a sunny day. Kevin sketched logistics for pickup day: we will have a tent set up with the LCBA banner, and only LCBA members will be picking up bees on the 19th, from 2 pm to 7 pm.

***JC Bees Orders:*** the pallet bees may arrive, at the earliest, this Sunday night: Dan Maughan announced that he is looking for more details. Anyone with a question about their JC Bees order was invited to call Dan, who gave out his home phone. Dan asked that people be prompt in picking up their bees it is ok for the pallets to sit there for a day or so, but please do not wait too long. For the pallets, the optimal pickup time is when it is cold and bees not flying (early evening/early morning). For the nucs, if they are not picked up right away, Dan will let them fly by day and people can pick them up in the evening. Dan's farm is at 123 Goff Road in Chehalis, off Highway 6. Kevin noted that he and Dan plan to look at the bees; if they are not healthy, the club is not buying them. Pamela asked if the queens will be bred; Dan said yes.

***Education / Youth Scholarship Update***: Education Coordinator Peter Glover reported that all three Youth Scholarship students have assembled their hive components and are ready for their bees. Susanne noted that there are completion certificates available for those who finished the tests in our Beginning Beekeeping course. Peter encouraged new beekeepers to review the handbook concerning hiving package bees; there is also a link on LCBA's website, under Mentors/Classes, that shows step by step how to hive bees.

***Mentor Program Update***: Mentorship Coordinator Cody Warren urged new beekeepers to contact your mentor! If you are not sure who that is, please contact Cody. If you have a hard time reaching your mentor, again, contact Cody. It can be helpful in troubleshooting by email or phone to send photos of what you are seeing to your mentor.

*Above, LCBA's Club Apiary on April 20, after Cody hived our new package bees.*

***Apiary Update***: Cody said that we have one hive left, and it is thriving, being fed regularly to build it up. Kevin asked if Cody has enough helpers for apiary management: Cody said that he has confirmed with three of the five apiary committee members. Cody and Bob will be moving bees back from road in preparation for construction to widen North Fork Road. Cody reported that we have enough boxes to hive the bees that the club has purchased for the apiary.

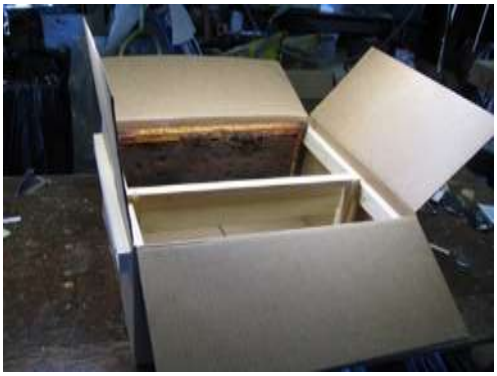
# LCBA's 2018 Youth Scholarship Students Have Hived Their Bees!


Above, 2018 Youth in Beekeeping Scholarship student Austin Nelson hiving his bees – photos by Austin's mentor, Dan Maughan.


Above, Caleb Smith assembling hive gear with mentor Mel Gregorich and feeding his newly hived bees. Notice that Caleb is showing his *Go Hawks* spirit with that hive painting job!


Youth Scholar Carmen Cleveland Berrera after hiving her Italian bees, left, and conducting her first hive inspection, right – Carmen's mentors are Susanne Weil & Peter Glover.

# Swarm Trapping ~ by Dr. Dewey M. Caron



***If you're looking to increase your number of colonies, consider setting out one or more swarm/bait boxes, an inexpensive means of starting additional colonies.*** Swarm traps can bring the swarms to you, rather than your chasing the swarms into the trees.

Bees make extensive preparations in their hive before swarm emergence. Same is true for the swarm before it moves into a new home. When the swarm exits their parental colony, the bees fly in a circular pattern moving away in just a few minutes to form as a clustered swarm (the swarm bivouac). Movement may be only a matter of feet but can be 300 yards or more; the bivouac site is often within sight of the apiary they have exited and often is at the same exact site of settled swarms of previous seasons. Bees tend to leave the original hive (swarm) when nice weather follows less than ideal forage conditions.

Clustered swarms may remain at the temporary bivouac site for a short time or remain overnight and even remain for more than a day. Clustered swarms are quiet with only scout bees leaving the bivouac site. The scouts seek a new nesting site, starting their search even before a swarm has exited the parent hive. The scouts spend 30 minutes or more thoroughly evaluating cavities, walking and flying the interior of a potential cavity. The scouts return to their cluster and dance to inform sisters about their cavity find. They will even check out competing sites after following other dancers. When a site is "agreed upon," the bees again become air bourn and as a group fly to a new cavity site. Such sites may be at some distance (> ½ mile) from the original homesite.

Beekeepers have intervened since forever to capture swarms to transfer to their apiary to start a new colony. Swarms are often "easy" to capture, depending upon the cluster location, but once inhabiting a new homesite, capture and transfer becomes a serious challenge. Swarm captures usually expand rapidly when hived by the beekeeper; they are recognized as excellent wax producers, apparently a function of wax gland stimulation aided by their hanging as a cluster.

Instead of trying to capture a swarm from their temporary bivouac site, beekeepers can attract home-seeking scout bees to a baited hive. Basically a bait hive is nothing more than a cavity,

offered by the beekeeper, that encourages scout bee discovery, investigation and then into which the swarm cluster moves. Research conducted by Tom Seeley, among others (see Tom's Honeybee Democracy for details of his investigations) has shown that bees have definite preferences in selection of a homesite. Beekeeper bait hives optimize what bees seek in a potential homesite.

***What should be used as a bait hive?*** Bees prefer, when searching for a home, a dry, unoccupied cavity of approximately 40 liters [2450 in3]. A 10-frame deep Langstroth box =2600 in3. The bees prefer a cavity opening that is small and low. A circular entrance hole of 1 ¾ inches is perfect; a standard hive bottom board entrance should be reduced to 3-5 inches. A 5-frame cardboard (or wooden) nuc box or 8 frame hive box can be substituted. Use of a standard bee box means not having to subsequently transfer the bees once captured.

Eugene beekeeper Morris Ostrofsky recommends a cardboard container box, 20 inches X 16 inches X 10 inches deep. He cuts 1-2 inch pieces of wood which he stables to both faces of the 16 inch sides of the cardboard box; the inner side board is positioned below the cover fold to provide a ledge to hang frames. The outer piece becomes a handy handhold. The folded top should be covered with a rain shield. The cardboard trap weighs and costs less than a bee box, while comb transfer of catches is as convenient as nuc frame transfer. See photo.

Neither Morris nor I are in favor of non-hive sized containers, such as cardboard planters or the Cornell bait box. Because bees begin almost immediately to construct parallel comb, their major drawback is the need to cut out comb and piece it into frames. Transfer is messy, highly disruptive and sometimes results in loss or killing of bees and/or the queen. It is an extra unnecessary step. Using standard frames/standard boxes, or hive-size cardboard boxes with frames, means simplified transfer of captures.

***How to attract Bees:*** Bees searching for a home (or swarm cluster bivouac site) are attracted to the smell of bees. Previous bee use, even if weathered a year or more, remains attractive. Thus a used bee box, if available, will attract their attention. Adding a drawn comb frame used previously for brood, or a piece of darker comb, with its wax and propolis smells, works well. Likewise, hive entrances previous used by bees, are highly attractive. Bees are not looking for honey so frames should be empty. If wax moths/small hive beetles infest the comb it will be less attractive. You can use Xentari for moth control.

Morris recommends stocking his cardboard bait box (or a standard bee box/cardboard nuc box) with one drawn brood frame which he places at back side of the box and filling out box with empty horizontally wired frames. He adds a starter strip to the empty frames (as shown in photo). In addition to the drawn comb, there are special swarm attractant chemicals that mimic the Nasanov (scent) gland pheromone, such as Swarm Commander, that help attract scout bees looking for a new home. Additionally, use of an essential oil, such as lemon grass, will help

entice scout bees to check out a bait hive. Morris says you only need a little scent - more is not better - and replenishing every 2 weeks.

***Where to place your bait hive?*** You can put a bait box on a hive stand in your apiary. However "normal" scout bee searching activity is where "natural cavities" occur such as tree hollows or small openings into empty cavities of buildings. Therefore it is recommended to select a partially shaded spot, visible to foraging bees, 7 to 20 feet high. Orient bait box opening to the south or east. Place several bait boxes, even asking neighbors for sites. If permitted, bait boxes near natural sites may be helpful. You need be very careful when placing, inspecting and/or retrieving bait hives, especially when elevated over your head. Consider using a temporary platform to hold the bait hive. It should be sturdy and not wobbly. Morris says he sometimes experiences vandalism of his boxes.

***Success!*** When you successfully lure a swarm, and bees adopt your baited hive, they should immediately start building comb and the queen start to lay eggs in a day or two. Be mindful not to disturb them for the first week. Beekeeper disturbance could cause them to abandon the nesting site in favor of another. IF a non-hive is used transfer frames to a standard bee box 3 weeks after capture. Consider treating your new livestock with oxalic acid dribble before there is capped brood. Continue to monitor hive development during the season. If they are too weak, use the swarm capture to augment another or add brood or a "resource" nuc to bolster them. You might consider replacement of the queen to help insure successful wintering and a strong spring start next year.

# BEES IN THE NEWS

*Thanks to Steve Arnold, Steve Norton, and Phil Wilson for sending stories!*

**RIGHT ON THE NOSEMA! ~ from Project Apis m.**

**Medivet no longer to produce Fumagillin-B, but new treatment is in the works**

"Beekeepers in the USA and Canada were surprised this month with a letter from Medivet, the single provider of a treatment for the honey bee gut parasite, Nosema. The letter to customers said the treatment, Fumagilin-B, is no longer available and, as a result, they anticipate closing their operation by June 2018. Many beekeepers use this treatment as part of their honey bee health management and with no alternative antibiotic for the treatment of Nosema, there is great concern about losing this tool.

"In July 2017, Project Apis m. funded a project to study and innovate another avenue to drug development as treatments for Nosema, recognizing the value of supporting practical research. And now we have something under way! The project is led by Dr. Jonathan Snow, at Barnard College, who is approaching Nosema disease from a biomedical background, targeting the molecular pathways unique to microsporidian parasites, and there are already promising results.

Using cage trials, one compound is as effective at killing Nosema as Fumagilin-B, without increased toxicity to bees.

“When PAm funded this project, in partnership with the National Honey Board Production Research funds, we recognized the urgent need to add it to the honey bee health tool kit. Dr. Snow will be consulting with the USDA to determine what could ‘fast track’ this treatment to market, if trials are successful. This situation is a great example of why choosing practical honey bee research is important. PAm is at the forefront of directing work that will support the beekeeping industry, and with trusted partners like the National Honey Board, we work to stay ahead of new risks to honeybee health. Stay tuned for progress on this project!

“Click <https://sites.google.com/a/barnard.edu/jonathansnow/home> to learn more about Dr. Jonathan Snow's Lab.”

**Refrigerating honey bees to fight mites, colony collapse – WSU Newsletter**

***By Scott Weybright, April 23, 2018. Thanks to Steve Arnold for sharing this story!***

*Bee with phoretic mite - photo by Scott Bauer, USDA Agricultural Research Service.*

“Saving honey bees is easier when varroa mite infestation is reduced. WSU researchers are hoping mid-season hibernation can help in the fight against the mighty mites. Varroa mites are pests that weaken bees’ immune systems, transmit viruses and siphon off nutrients. They’re a huge factor in colony collapse around the country.

“‘Most treatments only kill varroa on adult bees, and are generally only effective for three days,’ said Brandon Hopkins, assistant professor of entomology and manager of the WSU bee program. “But a lot of mites live in the brood, which are under a wax cap that treatments can’t touch. Those bees hatch out and are already afflicted.”

“Currently, treating for mites requires three treatments over a 21-day period to make sure you treat all the new bees that come out infested with mites. These treatments are difficult and expensive because beekeepers must treat all their colonies on a specific schedule. It’s very labor intensive to treat thousands of colonies by hand three times at precise timing cycles, Hopkins said.

“Cold storage: Bees don’t truly hibernate, but they do change their behavior in winter. Queens stop laying eggs, so no new ‘brood’ is created at that time. Last August, WSU researchers put 200 honey bee colonies into refrigerated storage. This is a time when bees are still active, but have finished making honey for the season, and there are no crops that require pollination. It’s also when beekeepers normally do a round of mite treatments.

“By placing colonies in refrigerators, the queen stops laying new eggs, which stops the production of brood. When the bees come out of refrigeration, there is no ‘capped brood’. At that point, Hopkins and his team apply a varroa treatment on the adult bees.

“The initial results were overwhelmingly positive. Researchers found an average of five mites per 100 bees on the control colonies (not refrigerated) one month after the normal three-cycle mite treatment.

“The refrigerated colonies had an average of 0.2 mites per 100 bees one month after the single mite treatment. “That’s a significant decrease,” Hopkins said. “Refrigeration is expensive, so we need to do more work to prove the cost is worth it for beekeepers, but we’re really excited so far.”

“Additionally, the infestation levels varied tremendously from colony to colony in the control samples. That’s because of the difficulty in treating colonies consistently over three cycles. The colonies that had the refrigeration treatment had consistent mite numbers with little variation.

“Doubling down: After hearing about this research, a few beekeepers approached the WSU scientists about doing a similar round of refrigeration in the early spring. Most commercial beekeepers in the U.S. take their colonies to California for almond pollination in February and March. But there’s a time gap between the end of the almond pollination season and the start of pollination season in the northwest.

“‘Beekeepers generally have two periods of time for mite treatments, before the bees make honey and after,’ Hopkins said. Once bees have mites, the infestation increases during the pollination and honey production months. “But if they can start with low mite numbers, the bees are healthier during the honey production period,” Hopkins said. “A lot of varroa damage comes while the bees are making honey.”

“Calculated risk with 100 colonies: This spring, Belliston Bros., a commercial Idaho beekeeper, donated 100 honey bee colonies to do a refrigeration study just like the one done in August last year. “It’s a big risk for them,” Hopkins said. “But if it works, beekeepers would have significantly better varroa control while using fewer chemicals. And they’ll have better colony survival during the following pollinating season. It’s a win all-around.”

“‘Nobody really knows how bees will react to being put back into their winter mode in what is normally the middle of their active season,’ he said. But that’s what science is all about. And if

this works, it could be a major and environmentally sound victory in the great varroa mite battle that beekeepers have been waging for decades. “We’re hopeful,” Hopkins said. “We won’t have results back for several months, but we’re excited we may have a way to help beekeepers keep their colonies strong and stable.”

Contact: Brandon Hopkins, WSU Department of Entomology, 509-335-8598, bhopkins@wsu.edu

*Photo credit: Ricarda Scheiner, American Bee Journal*

**In high doses, new alternative to neonicotinoids, pesticide Sivanto, impairs the taste and learning capabilities as well as the memory of bees: *American Bee Journal*, April 8 2018**

“In February 2018, the European Food Safety Authority (EFSA) confirmed that the pesticide group of neonicotinoids is harmful to bees. A novel pesticide manufactured by Bayer AG is therefore being discussed as an alternative; it contains flupyradifurone from the class of butenolides. The product goes by the brand name of Sivanto.

“Sivanto is assumed to be effective against various sucking insects such as aphids and whiteflies and can be used on a number of fruit and vegetable crops, but also on cocoa and coffee plants. Advertised as bee-friendly, the pesticide can even be applied on flowering fields. It has been available in the US market since 2015. In the EU, it is approved, but not yet available.

“Measurable impact on honeybees: Scientists from the University of Würzburg have now investigated the effect of flupyradifurone on honey bee behavior. The study led by Ricarda Scheiner, Professor for Neuroethology of Arthropods and Hannah Hesselbach, her PhD student was published in the current issue of Scientific Reports.

“‘Our data show that non-lethal doses of flupyradifurone after a single application to collecting honey bees have a negative impact on the bees' taste, learning and memory capability,’ Ricarda Scheiner sums up the study result.

“No impact when used properly:  The two researchers first tested the bees' gustatory response to sugar using a standard procedure. Subsequently, the bees were subjected to olfactory conditioning, and on the next day the scientists tested their memory to see what the bees had

retained. "Whereas the two smaller doses did not exhibit any adverse effect, a flupyradifurone amount of 1.2 microgrammes per bee results in significantly reduced perception and learning performance," Hannah Hesselbach says.

“The good news, however, is that the collecting honey bees will probably not come into contact with such high doses when the pesticide is applied properly. But the scientists believe that further research is necessary to determine the pesticide's influence on motor function, waggle dance or orientation.

“‘Also, we cannot say which influence flupyradifurone will have on bees in combination with other pesticides, which are frequently found in honey and pollen in residual amounts,’ Hannah Hesselbach adds. The impact on wild bees and other pollinators should also be examined according to the researchers.

To read the open access paper, visit: https://www.nature.com/articles/s41598-018-23200-0 ; https://mailchi.mp/americanbeejournal/april-8-2018-new-pesticide-as-alternative-to-neonicotinoids?e=e9ff21e0bb

**Scientists Create Microparticles That Could Help Save Honey Bees”: Bee Culture’s Catch the Buzz, April 21 2018**

“Scientists at Washington State University have created a microscopic particle that could save honey bee colonies from collapse. It attracts pesticide residue in bees. Over time, pollen tinged with itsy bitsy amounts of pesticides accumulates in a bee’s body, reducing the lifespan of each bee in a colony.

“Originally, the material is a powder that acts as a magnetic microsponge that absorbs ingested toxic residues. It can be incorporated into a sugar solution that’s fed to bee colonies. Each microparticle is the size and shape of a grain of pollen, making them easily digestible for bees.

“Scientists created the powder in such way that beekeeper can easily handle it. When consumed by the bees, the particles attract and absorb pesticide toxins. Then, they pass through the bees like any other food. Each particle only spends a few hours in their digestive system, which is enough to significantly reduce pesticide residues. In fact, each particle of Suliman’s technology can remove about 300 nanograms of pesticide residue — much more than bees can survive.”

*WSU is working to bring this new powder to market! To read more, visit: http://www.beeculture.com/wp-content/uploads/2018/04/BUZZ-4-21-2018.jpg*

**Honey Bees Struggle to Find Enough Good Bacteria: American Bee Journal, April 18, 2018:** Modern monoculture farming, commercial forestry and even well-intentioned gardeners could be making it harder for honey bees to store food and fight off diseases, a new study

suggests. To read about it, visit: **https://mailchi.mp/americanbeejournal/april-18-2018-honey-bees-struggle-to-find-enough-good-bacteria?e=e9ff21e0bb**

**"Declining Bee Population to Get Helping Hand with National Project: Grant allows researchers to develop app and Amazon-like seed distribution": American Bee Journal, April 6 2018:**

With a $338,613 grant from the foundation's Pollinator Health Fund, UCF Biologist Barbara Sharanowski and her team will make native seeds (specific to each ecoregion in the USA) widely available through online distributors. Think of an Amazon for wildflowers. The team will also create an app and online tools to educate the public and volunteers about the important role bees play in food production and how to properly sow the seeds. Individuals wanting to help beta test the project can sign up at https://lawntowildflower.squarespace.com. To read more, visit: https://mailchi.mp/americanbeejournal/april-6-2018-declining-bee-population-to-get-helping-hand-with-national-project?e=e9ff21e0bb

**"In Bryant Park, 3 Million Bees, Sold From the Back of a Truck": The New York Times, By Corey KilgannonApril 13, 2018**

*Bees in the Big Apple: "Three million bees were delivered to Bryant Park in Manhattan on Friday, most for sale but some for the park's apiary. Credit Chang W. Lee/The New York Times"*

“They’re coming,” Christina Blaustein said to her 4-year-old son, Reife, who was practically jumping out of his white beekeeper’s suit just after dawn Friday in Bryant Park in Midtown Manhattan.

Reife pulled off his mesh hood and ran to meet a box truck bearing a mural on its side of animated bees buzzing in front of the New York City skyline.

The truck’s back door opened to reveal its cargo: 3 million Italian honeybees.

They did not seem that happy after having endured a 15-hour drive up from Georgia, but Reife was delighted, as he examined the hundreds of wood-and-screen boxes, each one holding more than 10,000 bees.

*Reife Blaustein, 4, wore a beekeeper’s suit to claim his boxes of bees - Chang W. Lee/New York Times*

He picked out two boxes. His mother paid the bee man $150 apiece for them and drove them off to Long Island, where the family keeps hives.

They were among roughly 150 beekeepers who flocked to Bryant Park for the bee delivery, to replenish hives across the city and the region: on building rooftops, in small urban backyards and sometimes even indoors.

Beekeeping in New York City was long a furtive hobby. It has become more popular since the city made it legal in 2010 to keep hives. For many of the estimated 500 beekeepers now in the city, the annual bee delivery has become a springtime ritual, said the bee man, Andrew Coté, founder of the New York City Beekeepers Association.

Every April, Mr. Coté brings up millions of bees to sell — nearly at cost, he said. On Friday, he brought 9 million, a third of which he would sell in Bryant Park.

One by one, the beekeepers stepped up to claim their purchases. They ferried the buzzing boxes home by car, train, bus and bicycle. Each box had straggler bees — beekeepers call them hobos — buzzing outside along the screens.

The daunting parcels were placed in shopping bags, cardboard boxes, and in the case of Spencer Davis, 33, of Brooklyn, a backpack made from the hide of a water buffalo, which held two boxes as Ms. Davis cycled back home to Bedford-Stuyvesant.

Ray Sage, 65, an electrician who keeps his bees on the roof of a Lower East Side community center, strapped two boxes of bees to the rack of his bicycle.

“You just have to ride gently and avoid the bumps,” he said, adding that his hives produced some 30 pounds of honey last year.

Like many other beekeepers at the park, he said that his bees often survived the winter, but not this past one, most likely because of the fluctuating temperatures.

Mr. Sage said he began keeping bees to help pollinate the many community gardens on the Lower East Side, since bees work within a three-mile radius of their hive.

He said he had been stung so many times that it no longer bothered him, but rather educated him about his physiology.

“I enjoy getting stung, actually,” he said.

Charlie Kramer and Charles Mohacey said they would take the M11 bus to bring their two boxes of bees back to roof of the Church of the Holy Apostles in Chelsea.

Mr. Kramer said the church sold jars of honey after Sunday Mass and used it to sweeten the sacrament it bakes to use for the host.

Ben Hom, 48, a schoolteacher from Brooklyn who tends a farm near Oneonta, N.Y., during the summer, bought six boxes because bears destroyed his hives last spring. They devoured the honey and killed the queen bees.

“Once the queen is dead, it’s all over,” said Mr. Hom, who has built elevated hives this season.

One box was bought by April Greene and Arthur Meacham, a married couple from Brooklyn who have no children.

“Now we have 10,000,” joked Ms. Greene, who said the bees would be kept in an observational hive in their kitchen, with a tube to a nearby window to provide outdoor access.

She lashed the box to her backpack with bungee cords and prepared to bicycle home.

As David Glick, 33, from Boerum Hill, Brooklyn, picked up three boxes of bees, he kept his 10-month-old daughter, Genevieve, on FaceTime on his phone so she could follow the action too.

Mr. Glick, a health care consultant, said he kept his hives on the roof of a commercial building in Brooklyn Heights, a deal he sweetens with free honey for people at the building.

After the sale, Mr. Coté’s assistants added thousands of bees to the apiaries opened last spring at the northwest corner of Bryant Park, where Mr. Coté gives occasional free classes on beekeeping.

Then Mr. Coté headed off to bring bees to 40 hives he maintains, mostly on rooftops, around Manhattan. The apiaries help produce honey for his company, Andrew’s Honey.

Mr. Hubbard, the makeup artist from Chelsea, said he hoped his buzzing box of bees would help him command some respect on the subway up to Harlem.

“I’m going to take them out of the bag and just sit them on my lap,” he said.

“Good way to get a seat,” Mr. Meacham said.

https://www.nytimes.com/2018/04/13/nyregion/bees-bryant-park.html

# ANNOUNCEMENTS

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

***WASBA Newsletter:*** Pick up your copy of this bimonthly online at www.wasba.org: click on "Newsletters." The July Newsletter’s cover story is LCBA’s Youth Scholarship Program!

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

**~~ Susanne Weil, LCBA Secretary (Secretary@lcba.community; 360 880 8130)**