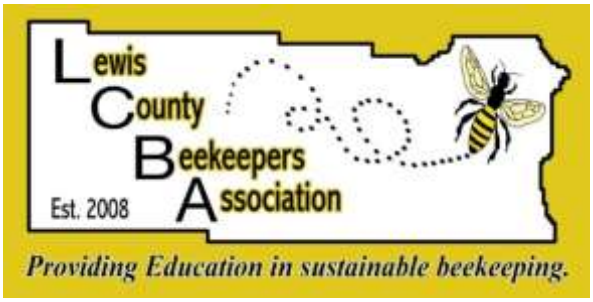


Visit LCBA Online: www.lewiscountybeekeepers.org

November 2018 LCBA Newsletter

In This Edition:

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, November 8: LCBA Monthly Meeting

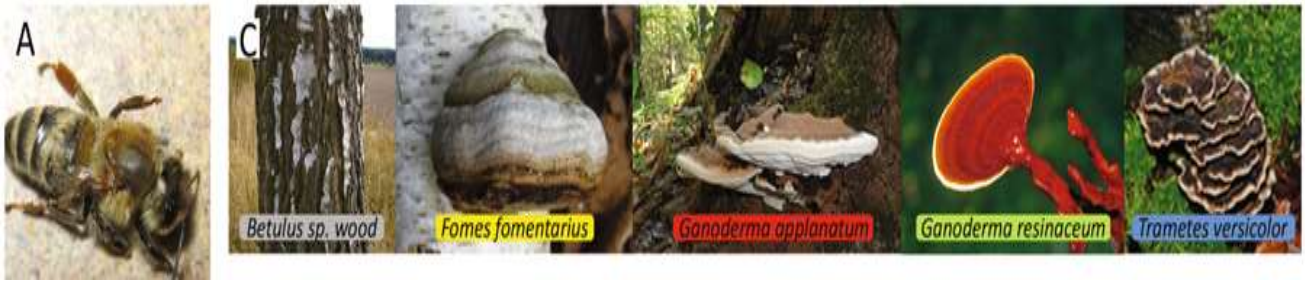
Fungi and Bee Health: Dr. Nick Naeger & Dr. Jennifer Hahn, WSU

ROOM CHANGE – WE WILL BEE IN WALTON SCIENCE CENTER 121

How can extracts from mushrooms help bees resist the Varroa mite and the viruses it brings? WSU researchers, Drs. Jennifer Han and Nick Naeger, will share highlights of their promising research. Here are links to articles for those who'd like to learn more now:

Seattle Times: https://www.seattletimes.com/seattle-news/science/how-the-mushroom-dream-of-a-long-haired-hippie-could-help-save-the-worlds-bees/

Scientific Reports: https://www.nature.com/articles/s41598-018-32194-8



Friday, November 9th, noon to 1 pm

Centralia College, Walton Science Center 121

Can't make the November 8 meeting? Nick & Jennifer will give their talk again for Centralia College's Rising Tide STEM lecture series. This talk is also free and open to the public.

Saturday, November 17 & Saturday, January 5:

Getting Started in Beekeeping

When: 10 a.m. to noon; Where: Centralia College, Washington Hall 103

What: Do you have friends who are interested in keeping bees, but not quite sure what's involved? Please tell them about this free orientation! LCBA beekeeping instructors Peter Glover and Susanne Weil will cover benefits of beekeeping, "bee biology 101," equipment needed, how to set up your apiary, what beekeepers do over the course of their first year, getting and managing bees, harvesting honey, parasites and diseases, & preparing for over-wintering.

This Orientation is also a preview of LCBA's Beginning Beekeeping Class ~coming this January & February (see below) - offered through Centralia College's Continuing Education Program. Questions? Call 360 880 8130; email secretary@lcba.community

December 8: LCBA's Holiday Potluck, Borst Park Kitchen #1:

2020 Borst Avenue, Centralia WA 98531

Kitchen #1 is on the left side of the road, just past the playground.

2 p.m.: Mead~Making: Cody Warren will show us how it's done!

3 p.m.: Social Time

4 p.m.: Potluck Dinner: What Should You Bring, Potluck-Wise? *Please bring a dish of food to share, plus a plate, cutlery, & cup to eat/drink from. Please also bring a serving spoon for your dish. Borst Kitchen has tables & chairs, ranges, a refrigerator, & plug-ins for hot pots. LCBA will provide a ham, as well as coffee, tea, paper cups, & napkins.*

5 p.m.: Fundraiser - Drawing for 2019 Youth Scholarship Program. *If you feel so moved, please bring an item to support our Youth Scholarship Program! The drawing is a fun time each year, and you may take home some fun bee-related items! Also - our 2018 Youth Scholars & their mentors will share stories from their first year in beekeeping.*

6 pm: Those interested can head over to the Lighted Tractor Parade!

6 Saturdays January 12, 19, 26, February 2, 9, 16, 9 a.m. to noon

LCBA's Beginning Beekeeping Course

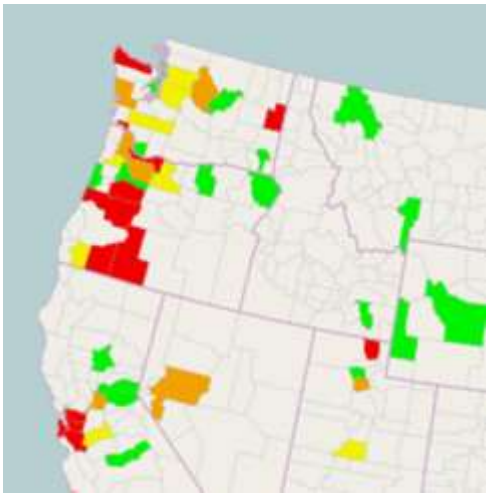
For details, visit http://lewiscountybeekeepers.org/education

Above, scenes from LCBA's 2018 Beginning Beekeeping class: left, Kevin Reichert & Dan Maughan teaching a lesson; right, Josh Smith & youth scholarship students Austin Nelson & Caleb Smith tasting honey during a class break.

Notes from LCBA's October 11 Monthly Meeting

Dr. Dewey Caron: Do You Have an October Plan?

Acting President Bob Harris introduced Dr. Dewey Caron, who came to share data from this year's bee surveys and what we may learn from them. Dewey began by noting results from the second annual Mite-A-Thon, sponsored by BeeInformed Partnership, the University of Minnesota, and others. This year, respondents sampled bees for mites during the two week period of the mite-a-thon and entered numbers on the site.



Mites Counts: The map above shows reported September mite counts: red means a count of over 10 mites per 100 adult bees; orange, 7 to 10 mites per 100 bees; yellow, above 3 but fewer than 7, and green, 0 to 3 mites per 100 adult bees. Sampling is done either by a powder sugar shake or an alcohol sample (see LCBA's website and click on the Education link for information about

these sampling methods). The big danger to colonies is in the fall, when the bee numbers are decreasing while the mites continue to increase their numbers.

Sampling Methods: Dewey noted that for the sugar shake, it's best to leave bees in for a few minutes: the heat of being enclosed helps dislodge the mites, which can then be shaken out through the mesh atop the jar – with the sugar come the mites. Dewey recommends shaking them out onto white paper so that the dark brownish-red mites stand out.. The alcohol shake may be more accurate because immersion in the solution separates mites from bee bodies, though the process kills bees (the sugar shake does not). 95% of mites lurk under the bees' bodies and usually on their abdomens – often you won't see mites on the back of a bee. Ordinary rubbing alcohol will do the job.

Randy Oliver uses a low tech approach: Solo drinking cups cut off about 3 inches from the bottom; he uses ordinary veil material to cover the hole. To sample, he puts the cut cup into a full cup: the top, cut cup holds bees, and he pours the alcohol through.

Swirled, not shaken: Dan Maughan asked why Dewey recommends swirling the bees in the cup rather than shaking. Dewey said that it is easier to release the mites, and also, there is less chance of mites getting caught among bee bodies. When you shake, the mites can get shaken back onto the bees.

Walt Wilson asked if it would be advantageous to open drone brood and decide to treat based on that. Dewey said that it would tell you there are mites, but not an accurate count. Still, no mites on a bunch of drones is good news.

Another method is carbon dioxide dispensed from a sprayer: two or three shots will help dislodge mites, but over 10 seconds of application will kill the bees. Bob commented that although we may try to be benign, it actually may be kinder, in sampling, to kill the bees outright and get reliable results. Dewey agreed, noting that if your colony can't afford to give up 300 bees, it has bigger problems.

Lewis County Mite Count Results: 3 to 6 mites was the highest count reported. On the map above, Lewis County was yellow on the map: above three mites per 100 bees, but fewer than seven. Colonies like that are salvageable if something is done. Generally Dewey does not recommend treatment if the mite infestation is under 3%. Commercial beekeepers, however, may not tolerate over 1% and treat.

What We Hope For in a September Colony: Fat Bees. The mite count survey was meant to be a teaching moment. In September, colonies tend to have high mite numbers. We hope that a September colony is healthy enough, with no disease, not raising a queen, not too many mites,

not scrambling for food because conditions are so dry, not constantly fighting off yellowjackets – all of these are stress issues. Yet bees have a big job in September, and that is to raise the bees that will become adults in October. These bees are different from bees raised earlier in the season: the October-raised bees must go through the winter. These are called "fat fall bees," and September health is critical to get that "fat" overwintering population, Dewey explained. If you sample a few bees in September and tear them apart, you will see white fatty tissue inside: this is good, showing that they are building up for winter. The "other fatness" is fat colonies: those with plentiful colony resources for winter.

Above left, optimal fall colony feed/brood configuration; middle, a good frame, with brood surrounded by the honey arch; right, a weak frame, with spotty brood and multiple emergency queen cells.

Optimum Fall Colony Configuration: if the cluster is in the middle, spanning boxes, this is good. By the end of winter, the colony will be softball-sized, but now, it should be soccer-ball sized (in summer, beachball-sized). See the good frame views slide. Also bad frames see the emergency queen cells in bottom pic with worker cells elongated into queen cells.

Building Up Fat Bees: The old-fashioned way to build up fat colonies is great natural forage, but this year, we didn't get that, so we supplement their feed with 2:1 sugar syrup. Dewey says that is the best thing to do to help them build up: feed as much heavy syrup as you can. Bees overwinter better on sugar water honey than on some natural sources, according to some studies. Be careful using heavy syrup in Boardman and bucket feeders, though: if the sugar is not fully dissolved, the crystalized sugar can plug the holes. Dewey looks to see if he can see through most of the holes before putting a feeder back on a colony.

Supplemental feed can be useful, too, giving essential oils. Hive Alive is one brand. Caleb asked what essential oils: Dewey said that lemongrass is good, but if you are making your own mix, don't put in too much of any essential oil, as it really does agitate the sugar syrup. Stevan Meyer noted that up in Mineral, his bees are still bringing pollen and nectar, perhaps because of their elevation: Dewey said that makes a difference, as things are still in bloom for them.

When to Stop Giving Fall Syrup? Gottfried Fritz asked about recommendations for when to change from syrup to solid food: Dewey said that this is based on temperature. Bees can take syrup into even mid-November if it is warm enough for bees to fly. If, then, in January the bees are light (heft the box for a quick assessment), and need emergency feed, you can give fondant. In spring, when you see the beginning of blooms, you can start feeding light (1:1) syrup. If you put sugar water on and they don't take it, either they are too sick to use it, or you surprised them and they don't know it is there, or three, they don't need the feed.

Resources to read about Varroosis and Varroa Control: Dewey recommends that we read the BeeInformed Partnership blog by Garrett Slater about progressed varroosis and how to identify it (it is in LCBA's October Newsletter and also online: https://beeinformed.org/2018/09/26/the-signs-of-mite-damage-how-to-identify-progressed-varroosis/). Varroosis is the disease of having Varroa in a colony. Now we have re-named the old PMS (parasitic mite syndrome) to **VMS** (varroa mite syndrome). Dan asked if this is different from disease called idiopathic disease syndrome – Dewey said that it is different, although the two terms are often used interchangeably.

Another great tool is the Honey Bee Health Coalition's "Tools for Varroa Management": https://honeybeehealthcoalition.org/varroa/ This is a very clear overview of when to treat, what to use, advantages and disadvantages of different methods.

Does Every Colony Need To Be Treated? Not every colony may need to be treated, Dewey noted; our role as bee colony stewards is to test and make that determination. When asked about the efficacy of treating in August, Dewey says: Sure you can, but test first and be sure there is an issue TO treat. Remember that all mite treatments have some degree of toxicity to bees.

If One Colony Has Mites But Others Don't, Treat Just One, Or All?, Peter Glover asked. Dewey noted that recommendations about this waffle. If you plan to keep sampling for mites, you could treat just the one colony and not the others, but you must be sure to keep monitoring. Colonies with high mite numbers are sick colonies, and the sick adults will leave and die outside the colony. Doing that helps the rest of the colony, so it is very altruistic behavior, but before they get to that point, they may drift into another colony when they return from foraging, thus spreading mites. Varroa has been found to affect bees' short term memory. It is not clear whether hemolymph depletion or mite-borne viruses does this: the answer may be both/and. To find out about short term memory loss, entomologists experimented in a lab setting to see what bees could and could not do by way of tasks; they were also able to scan the bees' brains. They have mapped the DNA pattern of bees and can show changes in genes being expressed in the bees' DNA.

Dan commented, concerning bees with VMS, that when you open up a hive, what you see is a colony without very many older bees, just young bees and brood that is failing. Dewey agreed and said you see the VMS most dramatically in damaged brood. Also, there is an insufficiency of adults in the colony to cover the brood: there should be a layer about two bees thick over brood to keep them about 90 degrees F. all the time. With experience, you can look at a brood frame and see this.

Oxalic Acid Vaporizing – Some Questions: Gary Kalich commented that he has treated all ten of hives with oxalic acid vaporizing three times, each a week apart – was this good or bad? Dewey said that the manufacturer says it's ok, so it is legal, but he believes this is also hard on the bees, harming their bodies with vapor burns. It's also highly toxic to people: oxalic goes from crystal to gas stage fast. If you use it, you need to use a respirator: not a respirator for painting, but one with a special cartridge to avoid damage to your lungs. If you have a mustache or beard, you will have trouble getting a solid seal on the respirator.

The best time for oxalic acid vaporizing is when no brood is present – in fact, Dewey does not recommend using oxalic when brood is present. Also, after the second and especially after the third treatment, bees get nasty: they do not like it. Dewey noted that more and more Africanized genetic stock is getting into California's breeding stock. An optimal time to treat with oxalic is

between Thanksgiving and January. Package bees can also be treated with oxalic acid vaporizing before hiving, swarms, too, can be treated when first hived. Again, as with any treatment, monitoring is necessary: if you treat only once and there is brood present, you have not solved your problem because mites will be lurking in the brood.

Heat as a Treatment for Varroa? Thermal Industries sells a thermal unit that you can use; the question is how to maintain the temperature uniformly throughout the colony. Kay Crawford tried this for two and a half hours; Dewey noted that was probably too little - four hours is optimal.

Five Stages of Varroosis: These stages are based on what the beekeeper can see looking into the hive In stage one, there are no signs of Varroa present: no mites, brood diseases, or signs of viruses. In stage two, phoretic mites can be seen on workers and drones: monitoring is needed. In stage three, chewed down brood and/or phoretic mites are visible. In stage four, there are signs of deformed wing virus (DWV) and/or chewed down brood and/or phoretic mites. In stage five, the colony displays signs of Varroa Mite Syndrome (VMS) and/or DWV and/or chewed down brood and/or phoretic mites.

Above left, a frame with some chewed down brood and Varroa poop (lower right in photo); right, a colony with much chewed down brood, visible mites, mite poop, and more. This is a stage five emergency.

Read the Brood Frame: As Dewey noted, brood tells a great story, so read the brood frame. If you can also see Varroa poop in chewed-down cells, that is not good news. In the left photo, above, you can see a chewed pupa on the lower right, a chewed pupa: the next door cell has Varroa poop on the left (it shows as white). In the photo on the left, however, there is also healthy brood, and bees are taking care of business, removing bad pupas. In contrast, in the photo on the right, the bees are not taking care of the problem themselves. The photo on the right also shows European foulbrood: the sign is the collapsed bits of brood. Uncapped brood should be a glistening C-shaped larva in the cell, but those pictured above are almost dissolved in photo. Dewey noted that European Foulbrood pathogen is in our colonies much of the time, but some conditions exacerbate it, like moisture. In European foulbrood, the brood does not mummify as it does in American Foulbrood or Chalkbrood.

Poor Nutrition Can Lead to European Foulbrood: Dan had a colony whose brood looked like the right-hand photo, above: he pulled out mummified larvae that died before being capped, but

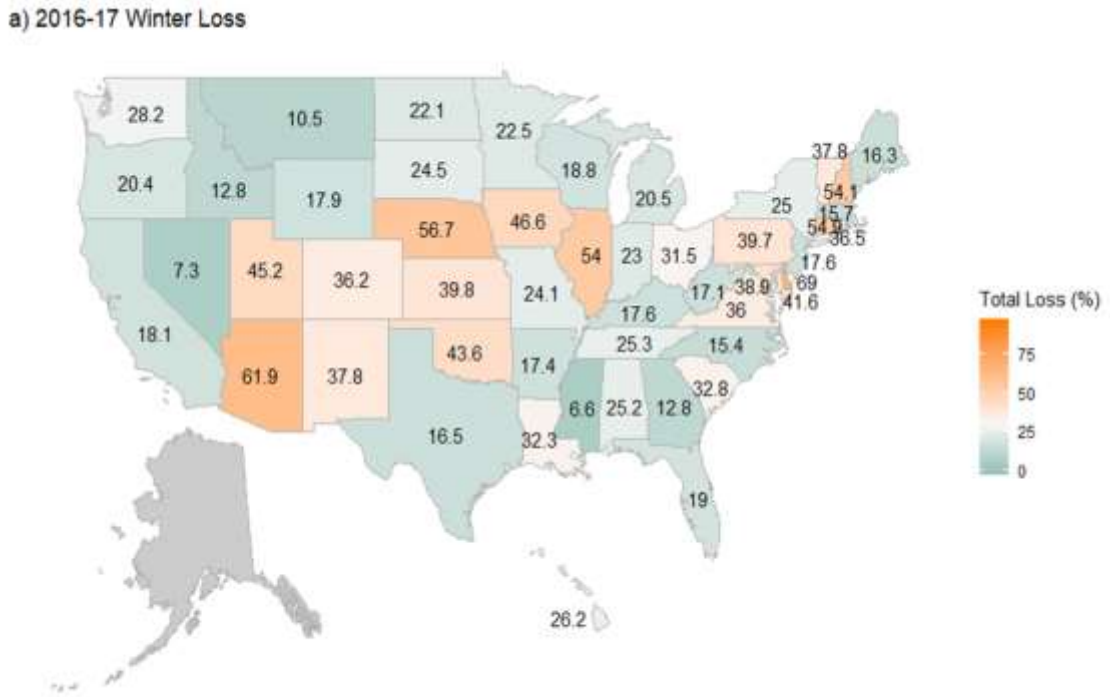
did not find ropy brood. Dewey said that is typical of European Foulbrood; in American Foulbrood, the brood dies under the cappings, where the ropiness develops. Dan treated and was able to save the colony. He did have some of his bees in blueberries and in cranberry bogs. Dewey noted that an experiment putting healthy bees into blueberries showed that within 2 weeks, EFB was present in the colonies. Blueberries lack the essential amino acids, so they are poor nutritionally for bees. Dan asked if we feed good pollen patties in spring, can that help? Dewey answered that spring pollen supplements help a lot. In China, scientists found bees in pears, a bad nutrition source, and put on pollen traps: this spurred the bees to collect more pollen, since pollen was being robbed from them. This pollen trapping is done to encourage pollination. Also, they fed sugar syrup to the colonies during this time. That approach would not be sustainable for commercial beekeepers, though.

Old Honey: To Use as Supplemental Feed, or Not? Dan noted that with old syrup, you must worry about spoilage, but do you need to worry about feeding old honey to bees? HMF is the toxic sugar, and it can be in sugar with high fructose corn syrup. Dewey answered that if you have stored honey, it is fine: just don't store it in a very warm place, though. What you must be careful of is the origin of the honey: it needs to be from a healthy colony because spores and viral particles can be transmitted through the honey.

Above, Dewey performs a necropsy exam on a colony that died. Why do they die? They starve, freeze, can't do cleansing flights, get bee Varroa Mite Syndrome . . . and sometimes, they just die.

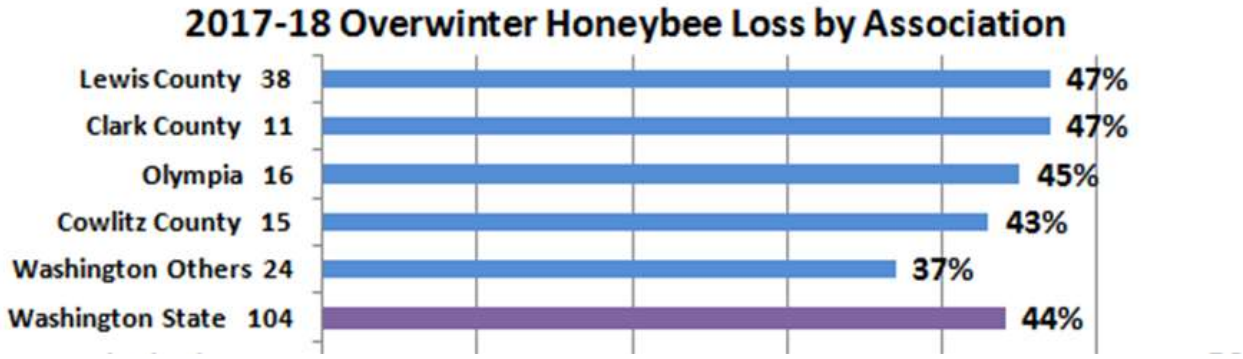
Extracts from Fungi: Effective Varroosis Control? Dewey noted that WSU is the leader in this research: Dr. Nick Naeger and Dr. Jennifer Hahn from WSU will be LCBA's November 8 speakers on this topic. It may be that the mycelium is going to be the breakthrough. The next big question is how to get the mycelium extract into a bee colony. Stay tuned for LCBA's Nov 8th meeting!

Bee Loss Survey Data



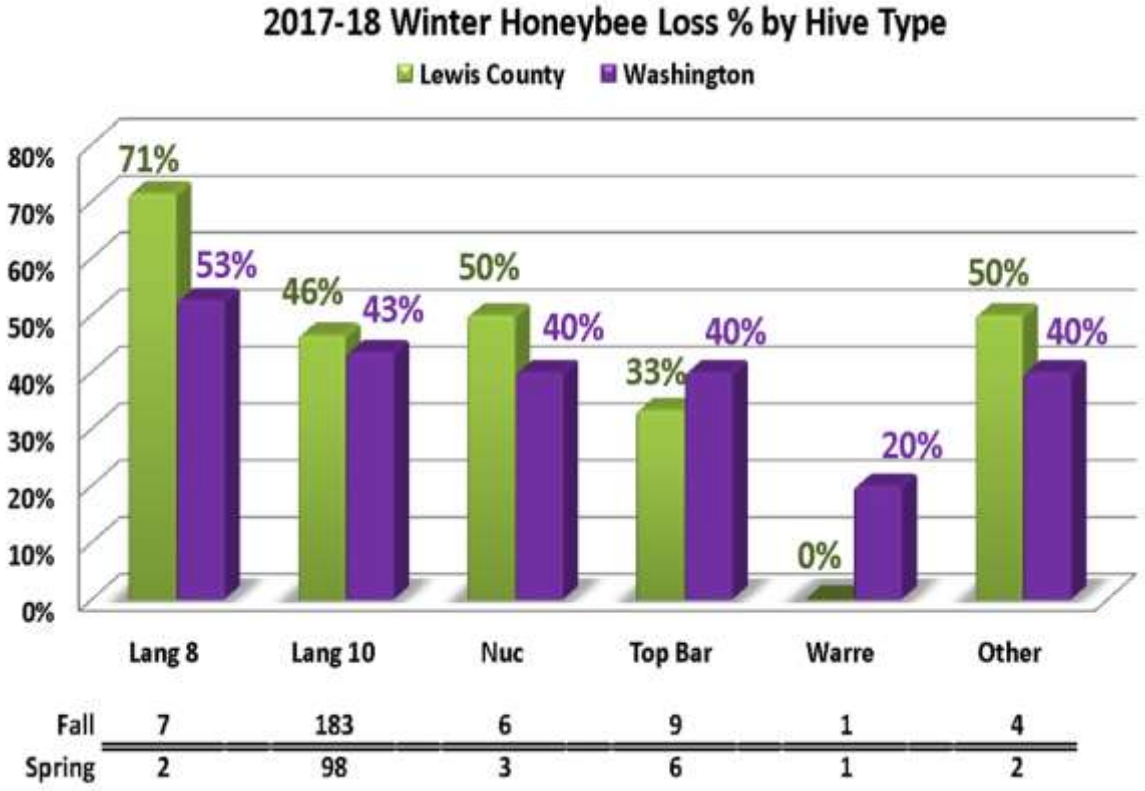
Above, state by state losses (blends commercial and small scale beekeeper data)

Loss numbers are going up again, but not uniformly. Small scale beekeepers' losses were 46.3%; commercial beekeepers' losses were 26.4%. Although we do not have clear data about why bees die, as this is a survey, we can see why beekeepers think their bees died. Sometimes the beekeeper is certain (say, yellowjackets seen hammering a hive).



Pacific Northwest Bee Survey: See survey data loss data, above: Lewis County is tied with Clark County, both for top county response (38 respondents) and for loss rate (47% as opposed to the statewide loss rate of 44%). To see LCBA's report in detail, including experience levels, overwintering interventions used, mite treatment used, and much more, visit: http://pnwhoneybeesurvey.com/wp-content/uploads/2018/05/2017-18-LewisBA-REPORTa.pdf

Among other interesting findings, hives fed on fondant succeeded best; in some years hard candy showed better than this year. Using an upper entrance, ventilation box, and equalizing hive strength were the three practices that made the biggest difference among reporting Washington state beekeepers. For mite management, screened bottom boards and brood cycle interruption were most successful, followed by requeening with a hygienic queen. Screened bottom boards give great advantages, not just for mite control, but as a garbage pit below hive, as well as for ventilation. Of chemical mite controls, ApiLife Var had the best success, followed by MAQs (formic acid).



Dewey will bee back with next year's survey results, so please do your survey, Dewey asks! In early spring, the link will be in the LCBA Newsletter. Also, please see BeeInformed Partnership (beeinformed.org) to get details on the 2017-18 losses nationwide.

All thanked Dewey for this detailed and thought-provoking presentation. Secretary Susanne Weil noted that this was Dewey's ninth visit to address an LCBA monthly meeting. Dewey also read LCBA's beginning beekeeping handbook and offered very helpful suggestions for our third edition. In thanks for all the support and encouragement that Dewey has given to us over the years, LCBA's board has voted to make him an honorary lifetime member of LCBA. Susanne presented Dewey with a certificate and two deep cedar hive boxes that Dan Maughan made for the occasion. Dewey thanked us for honoring him and noted how LCBA has grown as an educational association that supports its beekeepers.


Left, Dr. Dewey Caron takes questions (photo by Caleb Smith); right, Dewey with his Honorary Lifetime LCBA membership certificate and the two cedar deep boxes that Dan Maughan made for him.

October Business Meeting Notes

People's Choice Honey Tasting Contest: We began the meeting by announcing the winner of the People's Choice Honey Tasting Contest: Pamela Daudet! Susanne presented Pamela with a certificate and vintage "honey for sale" sign. Pamela's bees were near her raspberry, blueberry, and strawberry beds, and her honey has a unique berry flavor. Thanks to all who entered their honey for the visitors to enjoy at Seedpod Farm!

Pamela volunteered at the tasting tent; visitors were pretty enthusiastic about the different honeys!

Treasurer's Report: Treasurer Rick Battin reported that LCBA's savings account balance is $5,001.53; Youth Scholarship fund, $2,216.46; and checking, $5,424.84.

Youth Scholarship Program/Education Program: Peter Glover reported that Caleb and Austin have winterized their bees. He announced that the application deadline for 2019 is Friday, November 16 (postmark date) and asked members to help get the word out. Application forms and information are on our website: http://lewiscountybeekeepers.org/youth_scholarship_program/want_to_apply_2019_lcba_youth_in_beekeeping_scholarship_program_application_forms Also, we are holding two "getting started in beekeeping" orientations for those who are interested but not sure what kind of time and financial commitment is involved: Saturday, November 17 and Saturday, January 5; both are 10 a.m. to noon in Washington Hall 103 at Centralia College.

Mentor Program Update: Cody reported that mentors are working with mentees on feeding bees, candy board, mite control, cleaning entrances, etc. The Candy Board workshop on October 6 was attended by about 20 beekeepers, who saw both the boil and no-boil methods demonstrated.

Apiary Update: The candy boards made at the October 6 workshop were put on the apiary bees, and Cody reported that all are now winterized. We lost two colonies to yellowjackets; one deadout had a yellowjacket nest inside. The other nine colonies are looking good.

Community Outreach: Dan Maughan thanked the volunteers who helped out at Seedpod Farm: Pamela Daudet, Gottfried Fritz, Carmen Cleveland Barrera, Larissa Maughan, Cody and Linnea Warren, and Susanne Weil. The weather was a deterrent, but those who came enjoyed LCBA's display.

Southwest Washington Fair: Acting President Bob Harris reported that several members of the board met with members of the Fair Board and the Fair Manager to discuss LCBA's returning to the Fair in 2019. It was a positive meeting, and all agreed that LCBA would have our old space in the Floral Building, be able to remove our bees if the heat became threatening, and that we would be able to hold the People's Choice Tasting contest indoors in the Floral Building.

Nominating Committee: Cody reported that he and Gottfried had not received any nominations for the board positions up for election this November: Vice President, Secretary, and Education Coordinator. Bob Harris, Susanne Weil, and Peter Glover, respectively, are willing to continue for one more term. If no nominations are made by October 15, the slate will be elected, per the bylaws. The contact information for the nominating committee was in the September and October Newsletters,

Highlights from LCBA's October 6 Candy Board Workshop

Good times at LCBA's last 2018 workshop - on making candy boards. Cody Warren showed us how to make hard sugar candy boards to help our bees over-winter, as well as demonstrated the "no boil" method.

For Cody's YouTube video of how to make a candy board, visit: https://www.youtube.com/watch?v=fsw08r5B26o&t=71s This video stars Kevin and Jeanne Reichert demonstrating their candy board method.

For candy board recipes and more fall/winter management tips, visit our website: http://www.lewiscountybeekeepers.org/…/fall_management_issues Check it out!

Above left, Cody demonstrates the boil method for hard candy; right, Lisa Aldrich stirs as Cody checks the temperature. Below, left, candy boards that went to our Apiary bees; right, Josh & Caleb Smith talking with Cody during Q&A.

RECIPES OF THE MONTH

Bacon Avocado Breakfast Sandwich

Recipe courtesy of Chef Jessica Koslow, made for the National Honey Board

Ingredients for 4 servings:

For Honey Chili Dressing:

1/4 cup honey

3 Tb white wine vinegar

1/4 tsp. salt

1/2 tsp. chili flakes

For Toast:

1 avocado

8 slices bacon

8 slices whole-grain sandwich bread

4 large eggs

Directions:

In small bowl, combine the honey, white wine vinegar and salt and whisk until combined. Add the chili flakes. Using a knife, cut around the avocado pit, then twist the two sides in opposite directions to separate. Use the center of the knife to dig into the pit and twist in one direction and pull away from the flesh to remove. Use a spoon and scoop the avocado flesh from the skin and set the two sides on a cutting board, face down. Use your knife to cut thin slices of avocado. Brush with the honey chili dressing.

Cut each slice of bacon into 1/4-inch pieces and cook in a skillet on medium heat until the bacon is cooked through and crispy, about 8 minutes. With a slotted spoon, remove the bacon from the pan and place on top of 2 paper towels which sit on a plate. Brush the bread on both sides with the remaining bacon fat in the skillet and toast (you can toast the bread in a toaster oven, an oven at 425°F, or a toaster). Fry 4 eggs and set aside.

Place avocado evenly between 4 pieces of toast. Brush top with some of the honey chili dressing; place crispy bacon bits on top of avocado; place fried egg on top of bacon; season with salt and pepper and drizzle the honey chili dressing over top. Breakfast is served!

Butternut Squash Soup

Recipe from the National Honey Board

Ingredients for 6 servings:

2 T butter

1 onion, chopped

2 cloves garlic, minced

3 carrots, diced

2 celery stalks, diced

1 potato, peeled and diced

1 butternut squash, peeled,
seeded and diced

3 cans (14.5 oz. each) chicken broth

1/4 cup honey

1/2 tsp. dried thyme leaves, crushed

Salt and pepper, to taste

Directions:

In large pot, melt butter over medium heat. Stir in onions and garlic. Cook and stir until lightly browned, about 5 minutes.

Stir in carrots, celery, potatoes, squash, chicken broth, honey and thyme. Bring mixture to boil; reduce heat and simmer 30 to 45 minutes or until vegetables are tender.

Remove from heat and cool slightly. Transfer mixture to blender or food processor; process until smooth.

Return pureed soup to pot. Season to taste with salt and pepper. Heat until hot and serve.

Honey-Glazed Turkey

(A Taste of Home, https://www.tasteofhome.com/recipes/honey-glazed-turkey/amp/)

Ingredients for 14 servings (8 cups stuffing)

1 turkey (14 to 16 pounds)

GLAZE:
1/2 cup honey
1/2 cup Dijon mustard
1-1/2 teaspoons dried rosemary, crushed
1 teaspoon onion powder
1/2 teaspoon salt
1/4 teaspoon garlic powder
1/4 teaspoon pepper

STUFFING:
1/2 cup butter, cubed
2 cups chopped onion
1-1/2 cups chopped celery
12 cups unseasoned stuffing cubes
or dry bread cubes
1 tablespoon poultry seasoning
2 teaspoons chicken bouillon granules
1 teaspoon pepper; 1 teaspoon dried rosemary, crushed; 1 teaspoon lemon-pepper seasoning; 3/4 teaspoon salt; 3-1/4 to 3-3/4 cups boiling water

Directions (Prep time: 25 min. Bake time: 3-3/4 hours)

Place turkey on a rack in a shallow roasting pan, breast side up. Tuck wings under turkey; tie drumsticks together. Bake at 325° for 2 hours. In a small bowl, mix glaze ingredients; brush over turkey. Bake 1-3/4 to 2-1/4 hours longer or until a thermometer inserted in thickest part of thigh reads 170°-175°. Baste occasionally with pan drippings. (Cover loosely with foil if turkey browns too quickly.)

For stuffing, in a Dutch oven, heat butter over medium-high heat. Add onion and celery; cook and stir until tender. Add stuffing cubes and seasonings; toss to combine. Stir in enough boiling water to reach desired moistness; transfer to a greased 13-in. x 9-in. baking dish. Bake, covered, for 1 hour. Uncover and bake 10-15 minutes longer or until lightly browned. [Stuffing can also be baked in turkey. Loosely stuff turkey just before baking; bake as directed, increasing final bake time by 15 minutes or until a thermometer reads 180° in thigh and 165° in center of stuffing.] Remove turkey from oven; cover loosely with foil and let stand 15 minutes before carving. If desired, skim fat and thicken pan drippings for gravy. Serve with turkey and stuffing.

13 Thanksgiving Recipes With Honey

Sioux Honey and Sue Bee Honey have put together an entire Thanksgiving menu using honey-themed recipes. You can find the links to recipes here: https://siouxhoney.com/13-thanksgiving-recipes-with-honey/ ; they are also hyperlinked below. Among their suggestions:

Sides:

Brussels Sprouts with Balsamic Honey

Honey Glazed Squash

Sue Bee Gingered Carrots with Honey

Honey Cornbread Stuffing recipe from the National Honey Board

Pear Honey Cranberry Sauce

Bee Honey Cranberry Relish

Honey Potato Rolls from Foodie With Family

Honey Butter from All Recipes

Main Dish:

Sue Bee Honey Glazed Turkey

Sue Bee Holiday Honey Baked Ham

Honey and Rosemary Brined Turkey with Herb Riesling Gravy – Whole Foods

Desserts:

Healthy Honey Pumpkin Pie

Honey Pecan Pie

BEES IN THE NEWS

Bee Bandits May Be Waiting In The Wings, Ready To Swoop In And Take Bee Hives In California Holding Yards": Bee Culture's Catch the Buzz for October 31, 2018:

Jack Wickerd, a third generation beekeeper and president of Happie Bee Co., had hundreds of his Weedpatch-based bees stolen not once, but twice, by bee burglars. To read the story, visit: https://www.beeculture.com/catch-the-buzz-bee-bandits-may-be-waiting-in-the-wings-ready-to-swoop-in-and-take-bee-hives-in-california-holding-yards/?fbclid=IwAR1MTlXYJW6XK1WXv31KKjO4eVgnHg53NP0zDKrTnM-hvNRhx3ytXszl7VY

"Australia Has a Local Honey Adulteration Problem": Bee Culture's Catch the Buzz for October 18, 2018:

"Australian honey testing and the scandal over the purity of honey continues with the release of a new study that implicates local honey.

"The new study on the global honey industry conducted by Macquarie University scientists and peer reviewed and published in the Nature journal, Scientific Reports, looks at testing undertaken by the National Measurement Institute, the same high-security government lab used to test drugs seized by Border Force.

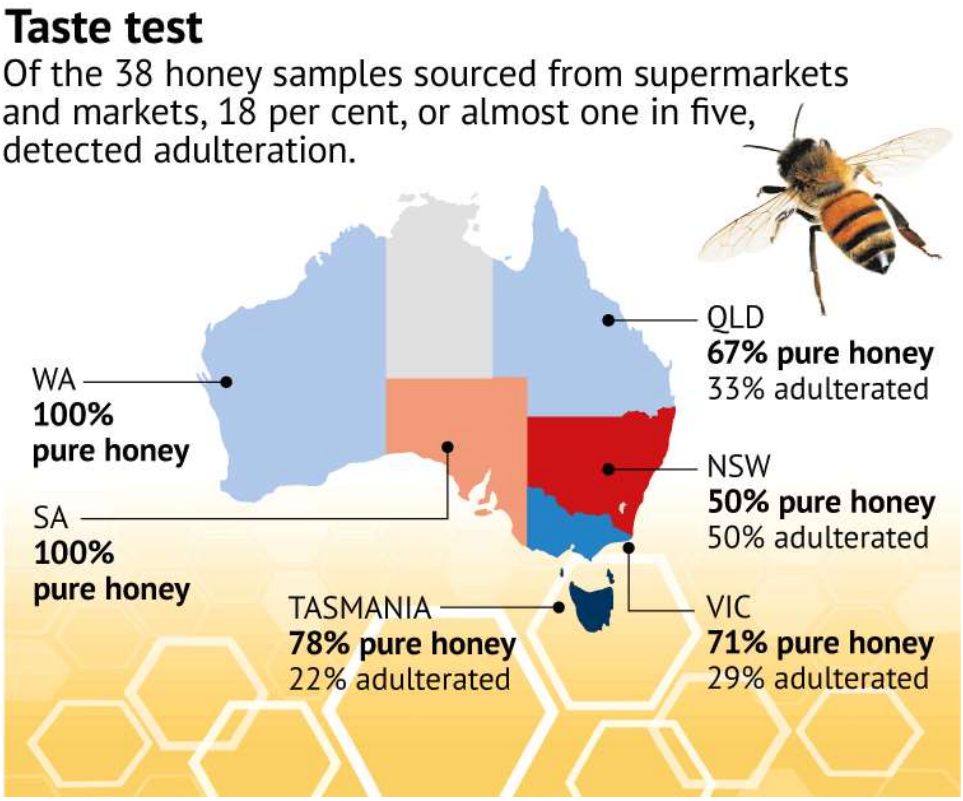
"The study found that almost one in five of 38 Australian honey samples sourced from supermarkets and markets had been adulterated by mixing honey with other non-honey substances.

“The adulterated honey was sourced from Victoria, Queensland, NSW and Tasmania, while samples sourced from South Australia and Western Australia tested pure.

“Manufacturers have been producing adulterated honey, which is typically bulked up with sugar syrup or other products, to boost production artificially,” according to IBISWorld Senior Industry Analyst, Nathan Cloutman.

“Previous controversy initiated discussions about honey testing methods but now with the latest report showing honey sourced along the eastern seaboard of Australia including boutique brands, to be fake, this global scandal over the impurity of honey is growing.

“Results of the study are expected to put pressure on authorities to start testing local honey. In Australia, only imported honey is tested.



Above, where the honey is less than honey…from the Sydney Morning Herald

“Using a reportedly decades-old C4 sugar test, only five per cent of imported honey is tested and the C4 test can’t detect adulterations such as added rice syrup which is used by fraudsters to dilute honey.

“Peter McDonald, the chairman of the Australia Honey Bee Industry Council (AHBIC), a peak body for the industry, said local honey was not tested by the authorities.

“It is up to the individual companies that actually buy the honey to then test,” he said.

“The scientific team doing the testing was led by Professor Mark Taylor from the Faculty of Science and Engineering at Macquarie University who expressed surprised at the findings from Australian-sourced honey.

“We know that the issue of adulteration is a prevalent problem but we didn’t think it would be that persistent in Australia for Australian-produced products.”

“Believing the research to be robust, Professor Taylor also stated the results could be conservative given the official honey test, the C4 test, was used, which has come under attack for its inability to detect substances used by fraudsters to beat the tests.

“According to IBISWorld, global demand for honey shows no sign of slowing down, supporting Australian and Kiwi beekeepers, driving growth in honey production.

“Australian honey production has grown significantly over the past five years. Rising demand for honey has led agriculture companies to increase their output and encouraged new independent beekeepers to enter the market,” Mr Cloutman says.

“Domestic honey producers are also benefiting from Australia’s reputation for producing high-quality agricultural products, with natural honey exports expected to grow at an annualized 8.8 per cent over the five years through 2018-19,” he adds.

“However, high demand for honey is likely to continue incentivizing companies to produce adulterated or counterfeit honey to increase output volumes.”

“Food fraud is a $US40 billion a year industry and growing as criminal gangs exploit weak regulation and outdated government tests. Honey is reportedly the third most adulterated food in the world, behind milk and olive oil.”

Read more at http://www.foodanddrinkbusiness.com.au/news/honey-scandal-hits-home#dLUjr85Wmdjd5dYQ.99 ; URL for this article, https://www.beeculture.com/catch-the-buzz-australia-has-a-local-honey-adulteration-problem/?fbclid=IwAR1LCG8KuwaQg5MRwpw7kl17BS-15HoxRzxlzlsNUke1kaXReJ_rV9mUKXk

"What Do Bees Do During a Total Eclipse? Why They Quit Buzzing for One Thing!": Bee Culture's Catch the Buzz for October 25, 2018; by Susan Ellis, Bugwood.org

Above, "BEE TOTALITY: During the solar eclipse over the United States in 2017, citizen scientists recorded bee sounds to help researchers find out what the insects do when day suddenly plunges into darkness."

"When the 2017 Great American Eclipse hit totality and the sky went dark, bees noticed.

"Microphones in flower patches at 11 sites in the path of the eclipse picked up the buzzing sounds of bees flying among blooms before and after totality. But those sounds were noticeably absent during the full solar blackout, a new study finds.

"Dimming light and some summer cooling during the onset of the eclipse didn't appear to make a difference to the bees. But the deeper darkness of totality did, researchers report Oct. 10 in the Annals of the Entomological Society of America. At the time of totality, the change in buzzing was abrupt, says study coauthor and ecologist Candace Galen of the University of Missouri in Columbia.

"The recordings come from citizen scientists, mostly school classes, setting out small microphones at two spots in Oregon, one in Idaho and eight in Missouri. Often when bees went silent at the peak of the eclipse, Galen says, "you can hear the people in the background going 'ooo,' 'ahh' or clapping."

"There's no entirely reliable way (yet) of telling what kinds of bees were doing the buzzing, based only on their sounds, Galen says. She estimates that the Missouri sites had a lot of bumblebees, while the western sites had more of the tinier, temperature-fussy Megachile bees.

"More western samples, with the fussier bees, might have let researchers see an effect on the insects of temperatures dropping by at least 10 degrees Celsius during the eclipse. The temperature plunge in the Missouri summer just "made things feel a little more comfortable," Galen says.

Above, "LISTENING IN: This fluffy white lump is a microphone protected from wind noise in a clover patch. Citizen scientists set up microphones like these to record the bees buzzing, or not, at 11 U.S. sites during the 2017 eclipse."

"This study of buzz recordings gives the first formal data published on bees during a solar eclipse, as far as Galen knows. "Insects are remarkably neglected," she says. "Everybody wants to know what their dog and cat are doing during the eclipse, but they don't think about the flea."

https://www.beeculture.com/catch-the-buzz-what-do-bees-do-during-a-total-eclipse-why-they-quit-buzzing-for-one-thing/?fbclid=IwAR2VPwDZh9vOhJXD9uaOCK05ZPYZo1uxNyuXHc_02XjLewWJd-p59ARSdls

"Glyphosate Affects the Larval Development of Honey Bees Depending on the Susceptibility of Colonies": Bee Culture, October 20, 2018

"As the main agricultural insect pollinator, the honey bee (Apis mellifera) is exposed to a number of agrochemicals, including glyphosate (GLY), the most widely used herbicide. Actually, GLY has been detected in honey and bee pollen baskets. However, its impact on the

honey bee brood is poorly explored. Therefore, we assessed the effects of GLY on larval development under chronic exposure during in vitro rearing. Even though this procedure does not account for social compensatory mechanisms such as brood care by adult workers, it allows us to control the herbicide dose, homogenize nutrition and minimize environmental stress. Our results show that brood fed with food containing GLY traces (1.25–5.0 mg per litre of food) had a higher proportion of larvae with delayed moulting and reduced weight. Our assessment also indicates a non-monotonic dose-response and variability in the effects among colonies. Differences in genetic diversity could explain the variation in susceptibility to GLY. Accordingly, the transcription of immune/detoxifying genes in the guts of larvae exposed to GLY was variably regulated among the colonies studied. Consequently, under laboratory conditions, the response of honey bees to GLY indicates that it is a stressor that affects larval development depending on individual and colony susceptibility."

Original: Diego E. Vázquez, Natalia Ilina, Eduardo A. Pagano, Jorge A. Zavala, Walter M. Farina; Published: October 9, 2018 https://doi.org/10.1371/journal.pone.0205074

https://www.beeculture.com/catch-the-buzz-glyphosate-affects-the-larval-development-of-honey-bees-depending-on-the-susceptibility-of-colonies/?fbclid=IwAR1YxtV0yLtSaQyP9CVwYvLinjke9DG1x3oodeC_PRk6qB0sZhxR5FFx8F0#.W8tkMKpWQLE.facebook

"From clearcut trees to habitat for bees: Hampton Lumber part of research project": Edward Stratton, The Daily Astorian, September 6, 2018

Above, Hampton Lumber's North Coast Pollinator Project in Full Bloom

"Jed Arnold, a stewardship coordinator with Hampton Lumber, recently walked a 1-year-old timber stand the company owns. The landscape was largely cleared of debris, aside from the burned wooden husks left from a slash pile burn.

“Rather than conifers, Arnold was on the lookout for yarrow, lupine, penstemons and other wildflowers the company planted to attract bees in cut stands.

“Arnold oversees an 18-acre pilot study by Hampton Lumber providing baseline data to researchers on how forestland owners can help struggling bee populations by creating prime habitat on recent clearcuts. “David Hampton was the big push behind this,” Arnold said of the company’s co-owner.

“Bees and other pollinators — vital to plant, insect and animal biodiversity — have been in drastic decline over the past several decades because of pesticides and habitat loss. David Hampton kept an interest in the issue and thought the company, which manages more than 155,000 acres in Oregon and Washington state to supply its lumber mills, might be able to help.

“A recent study led by wildlife biologist Jim Rivers, a professor in Oregon State University’s College of Forestry, indicated the removal of slash and other debris and compacting soil in recently harvested forestlands can create prime habitat for bees. In some areas, researchers found a threefold increase in population diversities in recently harvested stands. Similar research has shown prime pollinator habitat in recently burned areas.

“Hampton Lumber linked up with the Oregon Bee Project, an effort started by the state Legislature in 2015 between foresters and scientists at Oregon State University to promote bee health, for advice in creating the best habitat. The company then seeded four different sites and 18 acres with plants for bees to forage.

“Andony Melathopoulos, a leader of the bee project in the university’s Extension Service, said that while there have been similar studies on agricultural lands and roadsides, Hampton Lumber is the first major forestland owner he’s heard of doing pollinator research.

“They are aware that there is not a lot of good science around this,” he said. “It’s unknown territory.”

“The Oregon Bee Project trained Arnold in species sampling techniques and provided nesting boxes that will eventually be sent to the university for researchers to look at the diversity in the stands. Arnoldregularly monitors the pilot study areas, trying to identify species of bees and which plants take the strongest foothold.

“You’ve got to sit down, hold still and really watch the flowers,” Arnold said. “There was one day where there had to have been a dozen different species (of bees) that I saw just in a half an hour.”

“Christine Buhl, an entomologist with the state Department of Forestry, said Hampton Lumber’s pilot study will provide baseline data as the bee project tries to create research-based land management practices for others to help pollinators. The project is trying to start more pilot

studies in different climates around the state and track the change in bee populations over multiple years as new plants and soil compositions take hold, she said.

"The bee project also trains pesticide applicators on best practices to avoid harming bees and runs a citizen science program called the Oregon Bee Atlas, training individuals to identify and report the more than 500 bee species in Oregon. More information is available at oregonbeeproject.org.

"Arnold — who previously worked for a soil and water conservation district — credits the family-owned company for taking land stewardship seriously, from building roads to prevent soil erosion and replanting quickly after harvests to helping with stream restoration projects. The company recently worked with state and federal agencies to move the main stem of Big Creek near Knappa to its original channel, opening 13 miles of previously inaccessible spawning habitat for coho salmon and steelhead. Such efforts might fall by the wayside in companies owned by investors and focused more on profit, he said.

"This coming winter, Hampton Lumber will expand the pilot study to an additional 20 acres.

"In five to 10 years, the young trees in these study areas will start to shade out the flowers we're planting now," Arnold said. "But by then, we should have new patches of wildflowers coming up in nearby sites."

http://www.dailyastorian.com/Local_News/20180906/from-clearcut-trees-to-habitat-for-bees

"Sunflower Pollen Seems to Cause Real Problems for Nosema Ceranae. That's Good": Bee Culture, October 15, 2018:

Above, "Honey bees fed a diet of sunflower pollen show dramatically lower rates of infection by a specific pathogen. (Photo: Jonathan Giacomini, NC State University)"

"A new study offers hope for a relatively simple mechanism to promote bee health and well-being – give them access to sunflowers. The study by researchers at North Carolina State

University and the University of Massachusetts Amherst shows two different species of bees fed a diet of sunflower pollen had dramatically lower rates of infection by specific pathogens.

“Bumble bees on the sunflower diet also had generally better colony health than bees fed on diets of other flower pollens. The study found sunflower pollen reduced infection by the pathogen Crithidia bombi in bumble bees (Bombus impatiens).

“Sunflower pollen also protected European honey bees (Apis mellifera) from Nosema ceranae. These pathogens have been implicated in slowing bee colony growth rates and increasing bee death.

“The study also showed a deleterious effect, however, as honey bees on the sunflower diet had mortality rates roughly equivalent to honey bees not fed a pollen diet and four times higher than honey bees fed buckwheat pollen.

“This mortality effect was not observed in bumble bees. Jonathan Giacomini, a Ph.D. student in applied ecology at NC State, said bees already seem adept at collecting sunflower pollen.

“Annually, some two million acres in the United States and 10 million acres in Europe are devoted to sunflowers, he said, making sunflower pollen a ready and relevant bee food.

“We’ve tried other monofloral pollens, or pollens coming from one flower, but we seem to have hit the jackpot with sunflower pollen,” said Rebecca Irwin, a professor of applied ecology at NC State. “None of the others we’ve studied have had this consistent positive effect on bumble bee health.”

“Irwin said sunflower pollen is low in protein and some amino acids, so it should not be considered as a standalone meal for bee populations.

“But sunflower could be a good addition to a diverse wildflower population for bees,” she said, “especially generalists like bumble bees and honey bees.”

“The NC State researchers are planning to follow up on the study to examine whether other species of bees show the positive effects of sunflower pollen and to gauge the mechanism behind the mostly positive effects of sunflower pollen.

“We don’t know if sunflower pollen is helping the host bees fight off pathogens or if sunflower pollen does something to the pathogens,” Irwin said.”

https://www.beeculture.com/catch-the-buzz-sunflower-pollen-seems-to-cause-real-problems-for-nosema-ceranae-thats-good/?fbclid=IwAR0DdTw8lAcLEPtevKT2gpC8R6zisi55Pt2sySiTdc5l4g4htfYZ-hYXttc

ANNOUNCEMENTS

Also see "Upcoming Events"

Used Bee Equipment For Sale: Harold Weaver of Beeline Apiaries writes, "One of my customers is getting out of the beekeeping hobby. His health is making it difficult for him to take care of his bees. He has used beekeeping supplies and some new items that he would like to sell to anyone interested. His name is Leon Smith; phone number - 360-943-3108. He lives just north of Littlerock along Littlerock Road."

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."

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

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