

THE MARIN BEEK NEWS

Volume 8, Issue 4

April 2016

What's the Buzz?

Our next meeting will be on Thursday April 7, 2016 at the American Legion Log Cabin, 20 Veterans Place, San Anselmo, CA. starting at 7:30 pm. The meeting will feature a talk by Dewey Caron, PhD, professor emeritus, Department of Entomology and Wildlife Ecology, University of Delaware. Dr. Caron's talk is titled "An Update on Africanized Bees: What We Know Now".



Dr Caron's deep understanding of bee biology and his continued yearly work in South America give him a uniquely broad view of the status of Africanized bees. His career has included university teaching of Apiology and Apiculture, chairing the Eastern Apiculture Society and organizing its Master Beekeeping Program. He is currently contributing to the Oregon Master Beekeeping Program as well as the new UC Davis program. He is the author of the informative book "Bee Biology and Beekeeping."

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What You Missed

Our February meeting featured a presentation by Greg Hunt, PhD, Professor of Entomology, Purdue University. Dr. Hunt's talk was titled "How to Breed for Behavioral Resistance to Varroa in Your Local Honey Bees"

We are all aware there are problems with bee die-offs. In Indiana the colony loss rate was 59% last year. In Illinois it was 62%. In most cases of colony death varroa mites are the biggest problem because they vector a lot of viruses.

There are many products on the market that can be used to control varroa mites. The problem is that people don't want to treat their bees or they are too lazy.

What is a better solution? Breeding behavioral solutions. We are always breeding from survivors, since it is hard to breed from dead bees.

- Direct way to select for varroa resistance:
 - Use sticky boards to count mites
 - Use colonies with low mite counts for breeding

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- The key to this program is to keep good records and mark the queens so that you know if you are still working with the same queen.

There are two primary behaviors bees use to combat varroa mites:

- Varroa Sensitive Hygiene (VSH) – the bees detect virus in the brood and remove the infested larvae. To learn how to select for VSH go to <http://articles.extension.org/pages/30984/selecting-for-varroa-sensitive-hygiene>. Another good website for information about VSH is www.coloss.org/.
- Grooming Behavior – Dr. Hunt's lab started selecting for this behavior in 2007.
 - Asian honey bees, which is the original source of varroa mites, are very good groomers.
 - Mite removal appears to be an important trait and can be found in different stocks of bees. They found that bees that were good groomers also bite mites. The bite of the honey bee contains 2-heptanone, a compound which temporarily paralyzes the mite.
 - They decided to breed from colonies which had a larger proportion of chewed mites on the sticky boards.

Dr. Hunt measured mite removal in lab experiments, counting mites on the sticky boards and then measuring mites on the bees using the sugar roll method. They found that hives with high mite drop also had a higher amount of chewed mites. They also discovered that mite-biting is an inheritable trait. However, they also found that when queens were superseded the mite-biting trait becomes diluted.

The mite-biting stock that they created was named Indiana Mite-Biters.

In 2014-2015 they conducted a stock evaluation in the Illinois, Indiana, Ohio, Michigan area, comparing bees from commercial sources to the Indiana Mite-Biters.

The Indian Mite-Biters had twice the survival rate compared to the commercial bees. Commercial hives were also found to have three times the mite level of the Mite-Biter bees.

To help develop the Mite-Biter bees the Heartland Honey Bee Breeders Cooperative was recently

established. Their goal is to develop the mite-biting trait, through cooperation with Purdue University, into a commercially available stock; much like the Minnesota Hygienic Bees.

To find out more about Dr. Hunt's work visit <https://extension.entm.purdue.edu/beehive/>.

What's the Buzz continued from Page 1

Upcoming Meetings:

May 5, 2016

Yves Le Conte heads the French National Bee Lab, which entomologist Mark Winston calls "certainly one of the top honey bee research groups in the world. Le Conte seamlessly crosses the boundary between research and the beekeeping community."

He will tell the story of his discovery and investigations into French survivor stock. He said, "I think the scientific community is now convinced that selecting for resistance is possible" and, just as it occurred with tracheal mites, "we can hope that most of the bees will become resistant to Varroa".

How? He will tell us with his lilting accent and illustrations. It will be a talk not to miss. Mea McNeill has just published an in depth article about Yves Le Conte in the current Bee Culture. The article can be accessed on Mea's website: meamcneil.com where it will be posted under articles.

June 2, 2016

Bonnie Morse, co-owner Bonnie Bee & Company. She will be discussing results from the broodless study.

July 2016

County Fair
See County Fair Time on page 4 to find out how to enter exhibits or sign up to work in the bee booth.

Hive Tips

By Bonnie Morse, [Bonnie Bee & Company](#)

- **Seeing multiple eggs in cells does not necessarily mean you have a laying worker.** It could just be a queen is ready to go, but doesn't have the support crew necessary to support her potential. Do you see worker brood? Then likely a mated queen is in the colony. Only drone brood? More likely that it is truly a laying worker.
- **The flow is on!!! Prevent your bees from swarming: make sure there is adequate space in the brood chamber.**
 - **Strong hives are building quickly.** If your bees are starting to get crowded, add more space. Most importantly – be sure there is contiguous space in the brood chamber. If you add additional space, but there is only honey between it and brood area, you will not prevent brood area congestion – which is the cause of swarming.
 - **Adding a new hive body above the brood with new frames?** Help entice bees to move up by adding a frame of built out comb in the new box. Are you a new beekeeper who doesn't have any frames with built out comb? Help entice the bees to move up by pulling a frame with young brood (young larvae & eggs) up into the new hive body from area below. Nurse bees will stay with these bees and their presence above will entice building in the new hive body. If you do this:
 - Be sure the frame you pull up is kept directly above other brood frame(s) for easy access by nurse bees.
 - Replace frame you pulled in lower box. At this time of year (warmer temps so bees can break cluster to access food in different parts of the hive), you can place the replaced frame in the brood cluster area, OR between outermost brood frame & food frame, OR outside last frame in the box.
 - **Bees not quite ready for more space above?** But you are concerned about swarm prevention? Add space BELOW. A super below your other hive bodies will give queen potential space to expand into and also give space to returning foragers.
- **A Simple Formula for Splitting: #7 Split = 2+2+2+1 (for a 5 frame nuc box)**
 - 2 frames of brood (one capped, one mixed age

- that has eggs/young larvae from which bees can start queen cells)
- 2 frames of food (include pollen and nectar/capped honey)
- 2 frames of bees shaken in (preferentially from brood frames that have a lot of nurse bees; return brood frames to parent hive after shaking bees into your split)
- 1 empty frame
- Check split in 2-3 days to be sure they are making queen cells (no queen cells? Are you sure you didn't get the queen?)
- After ensuring that bees have queen cells, then be patient and wait for about 30 days +/- . By then, if the queen successfully returned from her mating flight(s) you will likely see capped brood.
- **Cleaning out a winter dead out in preparation for the arrival of new bees?**
 - Check frames closely for the presence of American Foulbrood. While chances are more likely that your bees perished for another reason, this highly contagious disease continues to be found in colonies in Marin. Do yourself – and your neighboring bees – a favor and educate yourself on the signs. Unsure? Ask for help on the Buzz.
- **If you haven't done so already, it's time to set up your bait hives!**
 - First swarm of the season was reported on March 5th. If you plan to set out bait hives this year, now is a good time to do so.
 - Review Tom Seeley's book, Honeybee Democracy, for complete details on what his research has shown that swarms prefer in a nesting cavity.
 - No time to read? Local beekeepers report success with the following set up:
 1. Deep hive box
 2. A couple of frames with empty built out combs (if you have them) in the center surrounded by empty frames with starter strips (or just empty space – but you'll need to add frames soon after they move in or else they will start building from the top of the box).
 3. Entrance reducer set to medium
 4. Box above the ground 2-3' (higher if you are able)
 5. Optional: Spray lemon grass tea (boil lemon grass until you make a dark tea) or other substances mimicking queen pheromones on the top of the frames and entrance of the hive.
 6. Wait to observe scouts!
 - Have a bait hive tip? Post it to the Buzz!

County Fair Time!



The **2016 Marin County Fair** is fast approaching. The official Fair entry form deadline is 12 May 2016. If you entered last year you should have received an entry package by now. If not, or if you are entering for the first time, there are entry forms and the 10 category descriptions for the Adult Honey Department on the Fair website, under Competitive Exhibits.

<http://www.marinfair.org/~media/files/fair/2016/exhibits/honey.pdf?la=en>

Entry forms are available at

<http://www.marinfair.org/~media/files/fair/2016/exhibits/2016-entry-form-color.pdf?la=en>

Please don't be shy, enter as many categories as you wish, you have plenty of time to get your entries prepared. Exhibits will be received over 2 days at the Exhibit Hall at the back of the Fair Grounds. **Friday, June 10, 3 pm to 7 pm & Saturday, June 11, 10 am to 5 pm, Exhibit Hall**

This is an opportunity for all of us to participate in a little good-hearted competition with other beekeepers on all types of hive products: honey, beeswax, and candles. Cash prizes are associated with the first 5 places. There are two big prizes, the Best of Show and the Barney Salvisberg Award, a founding member of Marin Beekeepers. Again, this year each will have additional monetary awards. All the exhibits are on prominent display at the bee booth during the fair (ribbons included) for your friends and neighbors to see, and we can showcase the many different hive products produced locally in Marin. There is still time to assemble and get your entries in.

Next up is staffing the bee booth inside the exhibit hall during the Fair which this year is from **Thursday 30 June to Monday 4 July**. This is our club's opportunity to do outreach and get the word out about our little "trusts" and hopefully dispel some misinformation. We get to talk about bees, show off the observation hive (a fresh one every day), look for the queen and enjoy the various reactions. Even as a "newbie" you have more knowledge than most of the public. The club also gets paid from the Fair to help continue our excellent list of speakers.

We staff the bee booth with 2 people during each 3- to 4-hour time slot. In exchange, each staffer receives a pass to get into the Fair and each time slot will have one car pass to the exhibitors' parking lot in back of the exhibit hall. The rest of the day you can enjoy the other parts of the Fair. The entertainment web site should be up soon

<http://www.marinfair.org/2016/pages/concerts> , (included with entry) special events and attractions, especially the fireworks display each night at 9:30 p.m. The sign-up schedule will be sent to the Buzz soon. Email me your preferences. Stralka.daniel@epa.gov Please sign up and join in the fun!

The important dates are:

May 12

Entry forms due in with this year's entry fee of \$2.50 per entry.

June 10 and 11

Drop off exhibits in the Fair building at the back of the Fairgrounds

Friday, June 10: 3:00 to 7:00 p.m.

Saturday, June 11: 10:00 a.m. to 5:00 p.m.

We can accept late entries even if you hadn't submitted a form. Fill out the forms before you come to expedite the processing.

June 12

Judging by Lynne Devereux.

June 20

Finalize Bee Booth sign-up.

July 1 to 5

MARIN COUNTY FAIR!

July 6

Entry retrieval and collection of awards.

Beekeeping Classes

Upcoming Classes

Mark your calendar for other 2016 classes and workshops (for additional information or to register for a class contact: www.bonniebeecompany.com).

Field workshop: Beekeeping Basics (using your tools, inspection basics, swarm prevention), Sat., May 14, 9:30am – 12:30pm

Field workshop: Intermediate Beekeeping (splitting hives, queen issues, space management), Sat. May 14, 1:30pm – 4:30pm

Summer and Fall Hive Management class series,
Class room sessions: Wed. 7/6 – 7/20, 6:30pm – 8:30pm, San Rafael Community Center, Field Day: Sat. 8/6, 9:30am – 12:30pm, location TBD

2016 Marin Bee Census

It's survey time again! Over the past seven years, we have been able to collect a lot of data on what is happening with our local bee population, and what methods/equipment/etc. local beekeepers are employing to get these results.

Whether you have one colony or twenty, your input is important. Even if you don't keep bees, but observe a feral colony in a tree or the walls of the house, we want to know what's happening with the bees.

Past surveys have indicated that some of the fewest losses occur with local splits and early season swarms. Before 2012, few beekeepers were splitting colonies, but the trend seems to be increasing. Did you do splits or receive splits last year? How did it work out? How about Bonnie Bee & Company nucs? Colonies from the Split Squad? We want to know!

The 2015 survey (for 2014 season) showed the lowest losses since the survey began – 34% down from a 53% high. But anecdotal evidence suggests that 2015 – with drought, earlier mite problems, earlier dearth, etc. – was a tough year for bees in Marin. Was this true for your bees? Take the survey!

Survey will be available online soon. Watch for the link on the Buzz – and share with your beekeeping friends who may not be association members.

From the Librarian's Desk

Did you know that we have a listing of the library materials posted on the Club website in the Club Resources section? If there is an item of interest to you, please feel free to email Marina (marinamay53@gmail.com) and she can confirm loan status & if available, hold it for you to pick up at the next Beeks meeting.

Bee Audacious Update

Plans for the Bee Audacious conference continue to come together. What is Bee Audacious? Full title is "Audacious Visions for the Future of Bees and Beekeeping". The stated purpose is:

"A collaborative working conference to envision bold evidence-based ideas through which honeybees, wild bees, beekeepers and pollination managers can prosper."

Some of the best bee minds on the planet will gather in Marin County next December for the two day working conference to be guided by the methods utilized at the [Simon Fraser University Center for Dialogue](http://www.simonfraser.ca/dialogue). Mark your calendar for the panel discussion of the leaders (including Tom Seeley, Marla Spivak and Mark Winston) that will take place at Dominican University at 7:00pm on December 14th. Can't make it? It will be live streamed and available for viewing at www.beeaudacious.com.

Some of the latest updates:

- Dominican University to sponsor the venue for the panel discussion
 - [Stephen Martin](#) to be a conference leader
- Participants to include [Danielle Downey](#), Director of Operations, Project Apis m.; Mace Vaughan, Pollinator Conservation Program Co-Director, [The Xerces Society for Invertebrate Conservation](#) and [Claire Kremen](#), Professor, Environmental Sciences Policy and Management, University of California Berkeley

Want to help make this happen?

Volunteers needed for hosting participants before or after the conference.

Sponsors! Not only is this a great cause to support, but with folks like Marla (whose TED Talk has over 2 million views and counting), it's a great opportunity to let the world know you and your business support bees.

Contact info@beeaudacious.com

UC Davis Bee Symposium



A day long event discussing bee health and exploring best management practices help sustain the bee population for the future. Our second annual **Bee Symposium: Keeping Bees Healthy** will be hosted at the UC Davis Conference Center on Saturday, May 7, 2016. Keynote speakers will include Yves Le Conte, Head, French National Bee Lab from Avignon, France and Dennis vanEngelsdorp, Assistant Professor of Entomology at the University of Maryland and project director for the Bee Informed Partnership. Additional speakers include entomologists from throughout the state, including Rachel Vannette, Quinn McFrederick, and Brian Johnson. More speakers to be announced as they are confirmed. Continental breakfast, lunch and post-event reception included.

To register go to:

<http://honey.ucdavis.edu/events/2016-bee-symposium>

Date: Saturday, May 7, 2016

Time: 8:00AM - 6:00PM

Location: UC Davis Conference Center

Fee: \$80 (General), \$20 (Students)



Making up Nucs for New Queens



Moving Nucs to the Mating Yard