

THE MARIN BEEK NEWS

Volume 8, Issue 11

December 2016

What You Missed

Our November meeting featured a presentation by Susan Kegley, PhD, University of North Carolina at Chapel Hill; Dr. Kegley is Principal and CEO of the Pesticide Research Institute.

Dr. Kegley presented results from a hive tracking study with three commercial beekeepers, measuring colony strength, pathogen levels, pesticide concentrations, and mite loads multiple times during 2014 for 60 hives, starting with the colonies right before they went to pollinate almonds, immediately after they came out of almonds, early summer and early fall. Colony strength measurements were made more frequently, about every 4-6 weeks. The primary findings of the study showed:

1) Exposure to both fungicides and neonicotinoid insecticides (except dinotefuran) were significantly correlated with poor colony health. The effect was stronger for fungicides, potentially because the exposures were higher, since these pesticides are applied during almond bloom when the bees were foraging. There are concerns also about exposures to multiple chemicals at the same time, since certain types of fungicides impair the bees' ability to excrete toxins. For most of the pesticides found in the colonies in the study, a patent exists for a mixture with another chemical also found in the samples that has synergistic interactions that increases the toxicity of the chemical to insects.

2) From a preliminary analysis, there were no trends in the abundance of pathogens with colony strength. A more comprehensive analysis of the pathogen data by Montana State University researchers is currently in progress.

3) As for mites, all three of the commercial beekeepers treated for mites 3-5 times during the year. There was no correlation of mite loads with colony survival, with even colonies having relatively high mite loads (up to 21 mites per hundred bees) surviving through to the end of the study. Overall, the data show that colonies treated for mites still show significant impairment of colony health that correlates strongly with exposure to

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What's the Buzz?

Our next meeting will be on Thursday December 1, 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 Marion Ellis, PhD, University of Nebraska. Dr. Ellis is a professor emeritus of Entomology at the University of Nebraska, Lincoln, NE. He will discuss how to safely and effectively use formic acid and oxalic acid in managing varroa mites.

Upcoming Meetings:

January 5, 2017

Bernardo Nino, staff research associate, Department of Entomology, University of California, Davis, CA.

February 2, 2017

Les Eccles, Ontario Tech Transfer Program Lead.

March 2, 2017

Ross Conrad, beekeeper and owner of Dancing Bee Gardens, Middlebury, CT. He will speak about CCD and Organic Solutions. Workshops will be scheduled for Saturday.

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certain fungicides and insecticides. What this means is that controlling varroa mites, while important for colony health, does not preclude colony collapse when there is exposure to certain pesticides.

4) One of the commercial beekeepers in the study, as well as three other commercial beekeepers with 3,000-10,000 colonies each, noticed rebounding mite populations after treatments with formic acid. They are concerned enough that they have reported this failure of formic acid to the US EPA. This observation provides an alternative explanation for the "reinfestation" that is often blamed on neighboring beekeepers that do not treat for mites. If formic acid is not killing the mites or even if it is only killing the phoretic mites (those that are on the adult bees, and not in the brood cells), the rebound in mite population could be explained by the mites in the brood cells hatching out with the brood. Because there are fewer brood cells and a declining population of bees at this time of year, the number of mites per hundred bees increases dramatically. The commercial beekeepers do not see the same rebound in mite populations when treating with different miticides, like amitraz. There was some misunderstanding of this result and discussion on the Buzz about the mite rebound phenomenon the week after the presentation (See thread dated Sunday November 6, 2016. Subject Line - Mite Away Quick Strips (MAQS), where the speaker explained this observation in more detail and with reference to the scientific literature on colony population modeling and experimental data on mite introduction into colonies from others nearby. There was clarification that it is NOT that the mites are becoming resistant to formic acid, but more likely that it is a difficult miticide to apply and ensure the correct dose is received by the mites.

Thanks to Therese Oxford for providing the "What You Missed" column this month.

April 6, 2017

Charlie Blevin, beekeeper, San Francisco, CA. He will discuss swarms and extractions.

May 4, 2017

Randy Oliver. Workshops will be scheduled for Saturday.

June 1, 2017

Gadgets and Gizmos

July

No meeting: Marin County Fair.

August

No meeting: Marin Beekeepers Annual Potluck.

From the Librarian's Desk

Many thanks to Penny Wells for taking care of the library last month! Don't forget to stop by the library table & see if there's some reading material to get you through the winter evenings.

If you have items borrowed, Thursday's meeting would be a great time to bring them back for circulation to your fellow club members. If you're not able to attend, please contact Marina (marinamay53@gmail.com) to make alternate arrangements.

Hive Tips

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

Cold doesn't kill bees - moisture does. Make sure your hive tilts forward slightly so rain doesn't condense inside on your bottom board. If you see moisture inside on your top, you should consider giving them a little more ventilation by adding a shim, stick, or thin piece of wood between the top and inner cover.

Store your honey supers and built out combs in a manner that will not encourage wax moths, i.e. where light and airflow are abundant or in a freezer (or after freezing). If you stack outside, put spacers in between hive bodies to allow for airflow. Do not allow too much space or mice might move in and make a nest and destroy your combs.

Temps are cooling down and the drones are all but gone. If you plan to check your hive, have a plan for why you are going in and what you are looking for. Plan to inspect when temps are 60 or above and keep your inspection as brief as possible. Inspecting at this time of year for curiosity sake could potentially do more harm than good (and if you injure your queen the colony has low likelihood of successfully replacing her), but a well planned and executed inspection could save a colony from starvation or mites.

You can find out a lot of information without opening the hive. Put your ear up to the side and knock gently. What kind of buzz do you hear? Does it sound like a large cluster or a few sporadic bees? Try to heft the hive. Is it heavy with stores? Or is it light and lifted with ease? If you have a screened bottom board, what do you see on the monitoring board? From debris, can you see if the the size of the cluster the same, smaller or larger than when you looked last? Do you see dark cappings from brood emerging? Or lighter cappings where stored food is being consumed?

Beekeeping Classes

Upcoming classes with
Bonnie Morse, Bonnie Bee & Company:

Beginner Series: 9 hours, \$99. classroom sessions will include basic bee information, seasonal cycles of a colony, equipment options, where to place your hive, how to get bees and tips on working with your equipment. When the weather warms up, there will be a field session so you can observe and practice working with your tools and bees.

Class room sessions: Wednesdays, Jan. 25, Feb. 1, Feb 8, 6:30pm - 8:30pm (3 classes, course code 26357, drop in fee = \$30/class)

[San Rafael Community Center](#), 618 B St., San Rafael
Field Day: Sat., Mar. 11th, 9:30am – 12:30pm (drop in fee = \$40)

Intermediate Series: You've got your colony through winter (or not) - now what? Class sessions will include how to clean up your equipment, expanding hive size for spring, swarm prevention- and if that fails, swarm capture, setting up bait hives for swarms, identification of common pest and diseases and management options for them. Topics will also include dealing with special situations: aggressive hives, queen failures, and laying workers. Field day will include information on how to split a colony, pest and disease ID, and swarm prevention.

Classroom sessions: Wednesdays Feb 15, Feb 22, March 1, 6:30pm - 8:30pm, 3 classes, course code 26356, drop in fee = \$30/class
[San Rafael Community Center](#), 618 B St., San Rafael

Field Day: Sat., Mar. 11th, 1:30pm – 4:30pm (drop in fee = \$40)

Bee Audacious Update

Thank you to everyone who has volunteered to help with notetaking at the conference. Those spots are now all filled. There are still a few ways to be part of Bee Audacious:

- 1) Volunteer opportunities still available: Pick up a participant at SFO (on 12/10 Dr. Jianke from Chinese Agricultural Institute needs a lift to San Rafael from SJC and Chaz Mraz, leader and 3rd generation beekeeper from Champlain Valley Apiaries in Vermont) needs a ride from SFO.

Three people are still looking for homestays. And we still need 2 volunteer ushers (who should be available by 4:45pm) for the panel discussion at Dominican on 12/14. If interested, email Bonnie: info@beeaudacious.org

- 2) **Come to the conference Public Report Back / Panel Discussion**

Following the Bee Audacious invitational conference, the leaders (Tom Seeley, Marla Spivak, Mark Winston, Jim Frazier, Bill Klett, Stephen Martin, Heather Mattila, Chas Mraz, Francis Ratnieks, and Neal Williams) will present the findings at a panel discussion moderated by Doug McConnell and hosted by Dominican University. December 14, 7:00pm. \$20 general admission, \$10 students and seniors.

[Tickets are available](#) through Eventbrite.

More info available at www.beeaudacious.com



Doug McConnell to Moderate Panel Discussion

The panel discussion will be followed by book signings of Bee Audacious leader and participant authors. Book sales will be available through Book Passage bookstore in advance as well as at the event. Books include:

- “Honeybee Democracy” by Tom Seeley
- “Following the Wild Bees: The Craft and Science of Bee Hunting” by Tom Seeley
- “If Bees Are Few: A Hive of Bee Poems”, Edited by James P. Lenfestey, Afterward by Marla Spivak
- “Bee Time: Lessons from the Hive” by Mark Winston
- “Honey Bee Removal: A Step by Step Guide” by Cindy Bee
- “Honey I’m Homemade” by May Berenbaum
- “A Field Guide to Honeybees and Their Maladies” by Maryann Frazier
- “Bees in America: How the Honey Bee Shaped a Nation” by Tammy Horn
- The Xerces Society Guide “Attracting Native Pollinators: Protecting North America’s Bees and Butterflies” by Eric Mader & Mace Vaughan (and Matthew Shepherd, Scott Black, in collaboration with Gretchen LeBuhn
- “The Beekeepers Handbook” Fourth Edition by Diana Sammataro
- “Keeping Bees With a Smile” by Fedor Lazutin, Editor Leo Sharaskin

- 3) Hang out with leader and participants at Heidrun Meadery on December 13th. After the main invitational conference concludes, many participants will be moving down the street (literally – about 9 minutes away south on Hwy. 1) for tours, tastings, and other Marin munchies hosted by [Heidrun Meadery](#). You're invited to join them!

Heidrun produces naturally sparkling varietal meads using the traditional French Méthode Champenoise. Their trademark Champagne-style of mead is light, dry, delicate and refreshing, with subtle exotic aromas and flavors found only in the essence of honey. If the weather cooperates, you'll also be to wander the grounds and see their gardens, greenhouse and apiary.

In addition to tasting Heidrun meads, we're organizing a variety of delectables produced in and around Marin including oysters from Tomales Bay (each ticket allows you to have two raw or bar-bequeued oysters and you can purchase more if you just can't stop eating them), cheese from Point Reyes Farmstead Creamery paired with honeys from around Marin, salmon (OK, we can't guarantee that the salmon you'll be eating was spawned in the creeks of Marin, but they do run here!), beer from Lagunitas Brewery and other yummys prepared by the Sonoma Shuckers. Price is \$35 per person. Price is lower than value of the evening since super volunteer Linda Albion was able to get many food and beverages donated.

17 tickets remaining. [Register through Eventbrite](#)

- 4) Feeling audacious? [Bee Progressive](#) has you covered with Bee Audacious t-shirts in navy blue and heather grey. A portion of each sale goes to support the conference. Or get your gear (including tie-dyed shirts) through [Zazzle](#).



Conference Planning Session