

THE MARIN BEEK NEWS

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What's the Buzz

Our next meeting will be on Thursday April 3, 2014 at the American Legion Log Cabin, 20 Veterans Place, San Anselmo, CA. starting at 7:30 pm. The meeting will feature a talk by Dr. Maryann Frazier, Sr. Extension Associate in the Entomology Department at Penn State University. Dr. Frazier's research includes determining the effect on honey bee colonies of pesticide residues in pollen collected by foraging bees. The title of Dr. Frazier's talk will be "Honey Bees as Environmental Indicators of Pesticide Use in Marin County".

Upcoming Meetings:

May 1, 2014

Dr. [Gordon Frankie](#), Professor of Environmental Science, UC Berkeley. Dr. Frankie's research focuses on the behavioral ecology and community organization of solitary bee species in selected environments in California and Costa Rica.

June 5, 2014

Dr. [Deborah Delaney](#), Assistant Professor at the University of Delaware. Dr. Delaney's research includes the genetic characterization of unmanaged bee colonies, savethehives.com feral bee project, and evolutionary biology of honey bees.

July 2 to 6, 2014

The Marin County Fair
Watch the Beek News and the Buzz for more information about how you can participate.

THERE IS NO REGULAR CLUB MEETING IN JULY.

What You Missed

Our last meeting featured a talk by Eric C. Mussen, Ph.D., Extension Apiculturist, University of California Davis. Eric is the only extension apiarist west of the Rocky Mountains. As an extension apiarist, he is the liaison between the bee researchers and both the commercial beekeepers and hobbyist beekeepers.

Dr. Mussen's talk was about the current state of beekeeping. Eric is retiring at the end of June of this year but he will still maintain a desk at the university. He said that the most satisfying part of his job has been translating scientific literature for beekeepers.

As he usually does, Eric opened up the floor to questions:

- Q. Do the chemicals show up in honey?
- A. Most chemicals are oil based but honey is water based. Very few traces of chemicals are found in

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honey.

Q. What about the wax?

A. Wax picks up chemical residue from two places:

1. Chemicals introduced into the hive by beekeepers such as fluvalinate and coumaphos. Coumaphos was recently found in self- drawn comb but they don't know why.
2. Chemicals from outside sources applied to control pests and diseases, such as chlorpyrifos (insecticide) and chlorothalonil (fungicide). For example, blueberry growers apply a number of chemicals, mixed together, every three to four days during bloom.

Q. What makes a colony collapse by the colony dwindling down to a queen and a small amount of bees?

A. Bees quarantine themselves when they are sick. They fly off and die individually. Eric said that not much CCD has been reported recently. In current surveys, the main cause of colony loss has been reported as a) overwhelming varroa, b) starvation. Only 7% of loss was attributed to CCD, which is a much smaller number than in 2006 and 2007.

Q. Did man have involvement in CCD?

A. Probably, but the phenomenon has occurred throughout history. In the past, CCD has only lasted for a year or two. This most recent outbreak has lasted for ten years. That might be because we keep bees alive better than in the past.

Q. Is there more varroa and starvation than before?

A. Starvation – no, we have starved bees for years.

Varroa – It is hard to judge what varroa is really like. Commercial beekeepers try to keep varroa from going exponential but many of them don't really understand it.

At UC Davis, they found that robbing during the nectar dearth really helped to spread varroa. Also, as a colony dies from overwhelming varroa the last bees leave searching for a new colony to join and infested with mites. Even if the bees are not admitted to the new colony the mites get in.

Another important point is that rearing of winter bees starts as early as August. Winter bees will

last for up to six months, but if varroa has fed on them their lives will be shortened. Opportunistic viruses introduced by varroa also take their toll.

Colonies usually reduce in size in winter but commercial beekeepers feed their bees to build up for almond pollination in February. Winter bees convert to summer bees and don't last as long.

In addition, commercial feed doesn't match the nutritional value of mixed pollen. The best answer is to allow bees to feed on a variety of pollen. Eric pointed out that during drought there are many plants that are not producing pollen and nectar. This is another stressor on the bees.

Q. Have you heard of the U.N. report that big agriculture will put the planet "out of business"?

A. The question is how do you feed all these people?
1. Each family becomes self-sufficient? That's not really practical.
2. Big agriculture provides cheap food, which people find hard to give up. Maybe we need to change how large scale agriculture operates.

Q. What are the alternatives to chemical suppression of mites?

A. You can create a broodless period in late summer. Cage the queen for a few weeks so she can't lay. The mites will have no place to reproduce.

Q. Does small cell size effect mites?

A. Studies have shown that it doesn't really make any difference.

Q. Can *apis millifera* gain some resistance to mites like *apis cerana* has?

A. *Apis cerana* are better groomers and also remove varroa from brood cells. *Apis millifera* doesn't have either of these traits or don't do them well enough.

There are some *apis m.* that do better than others, Minnesota Hygienic or Russian for instance. Where there is not the presence of commercial beekeepers, the mites seem to evolve and not be as virulent.

Hive Tips

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 with built out comb in 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 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.

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.

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!

2014 Marin Bee Census

It's survey time again! Over the past five 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 local 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? What about colonies from the Split Squad? Are you raising your own queens or getting them from other local beekeepers that are? We want to know!

New to this year's survey...are you tracking your mite loads?

Beekeeping Classes

Master Classes Workshops

\$20 fee per class, \$15 current local bee organization members, \$10 limited income. 6:30-9:00PM.

These Master Class Workshops:

- Provide the foundation to move your beekeeping practices comprehensively to the next level;
- Convey critical awareness about the obvious clues and timing for each seasonal next step;
- Share insight into the rhythmic patterns unique to San Francisco and the Bay Area.
- Will be especially meaningful to those who have had hives for several years but need to know what's next, and will provide a full spectrum of valuable insight for new and recent beekeepers. These synergistic classes weave together core knowledge of hive management with a bird's eye view of the entire year, and how timing is critical at each phase for overall hive success and prosperity.

April - (date/location to be announced)

HANDLING THE POWERFUL REINS OF 'SPRING INTO SUMMER'

- Hive stack & comb manipulation, balancing hives, corrective action, honey flow & harvesting, wax management, honey options - storage and bottling choices.

May - (date/location to be announced)

LATE SUMMER - ANTICIPATE DEARTH, RUN AROUND DEATH, AND WHISTLE PAST TROUBLE

- Mite monitoring schema, Integrated Pest Management (IPM) techniques, organic mite control methods. Viruses, bacterial disease impact, and parasite vectored diseases - FoulBrood & Nosema Ceranae, tests for Hygienic Bee Behavior, Mite resistance, Phorid Fly Parasitism. Dearth Impact, Record Keeping.

August - (date/location to be announced)

MAINTAINING HIVE HEALTH THROUGH THE ANNUAL CYCLE, PLUS FOUNDATIONAL WORK FOR NEXT SPRING'S SUCCESS

- Fall nectar flow patterns, seasonal population decline, protein feed health essentials, preparation

for winter & hive shutdown, working hives through winter.

For further information - 415-722-7640, robert@citybees.com, or <http://citybees.com/classes.htm>

Biodynamic Apiculture for Beginners

April 26, 2014; 10am – 3 pm

Biodynamic Beekeeping & Alternative Hives for the Beginning Beekeeper. Held at HomeFarm (Healdsburg, Sonoma County, CA), with a farm lunch to follow.

Reservation and info

at <http://www.brownpapertickets.com/event/594263>

Zen and the Art of living with Bees

April, 27, 2014; 10am – 3pm

This class will provide an overview of a holistic approach to apiculture for beekeepers and all “bee-lovers” to explore the honeybee from new vantage points. Held at HomeFarm (Healdsburg, Sonoma County, CA), with a farm lunch to follow.

Reservation and info

at <http://www.brownpapertickets.com/event/594286>

Pollen Project

Dr. Maryann Frazier will present the results of the Marin Pollen Project on Thursday as part of her lecture.



Participants in the Marin Pollen Project recently enjoyed lunch and the afternoon sun at Draper Farms

Marin Broodless / Survivor Stock Study Update

Broodless Study Fundraiser: Sugar Roll Mite Testing Kits for Sale

To help offset the out of pocket expenses associated with the 2014 Marin Broodless / Survivor Stock Study, Bonnie Bee & Company is selling Sugar Roll Mite Testing Kits.

Each kit includes everything you need to determine the mite infestation % of your colony:

- 1) Testing instructions
- 2) Plastic box – to hold all the testing kit components and also for shaking bees into to collect a ½ cup sample
- 3) Container with mesh top
- 4) ½ cup measuring cup
- 5) 1 Tbsp measuring spoon
- 6) Plastic container with powdered sugar
- 7) Plastic plate
- 8) Towel

Each kit costs \$45 + tax. Kits will be available at the April Marin Beekeepers Meeting (Thursday, April 3rd). Email Gary to place your order: gpmorse@comcast.net All proceeds will directly benefit the study.

Not interested in a testing kit, but want to contribute to the study? You can [make a tax deductible contribution through SuperOrganism](#).

Just what is the study? It is an attempt to try to understand why we are seeing broodless periods during unanticipated times – particularly when pollen is available.

Splits will be taken off colonies that have been collected over the past two years that have gone through broodless periods (when food available). These splits will be taken to the Romberg Center. Data is to be collected on a regular basis (at 2-4 week intervals, depending on time of year) and will include: 24 hour mite counts on monitoring boards (every visit), sugar rolls for mite counts (alternate visits, when temperatures allow), hive weights, cluster size, and more.

Ideally, we will be able to observe broodless periods and collect information on how they affect mite %'s as well as length of time for these cycles. In the absence of these periods, there is still much to learn from the data to be collected over 12 months from untreated colonies.



First colonies for Broodless Study arrive at Romberg